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THE Journal of Home Economics

For those interested in Homemaking
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THE Journal of Home Economics

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COMMUNITY HOUSEKEEPING¹

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The nature and scope of the work of the American Home Economics Association depend upon the definition or interpretation of the word *home*.

In the minds of most people *home* connotes a single dwelling located upon a plot of land which is at the disposal of the residents. This single dwelling is, or ought to be, owned by the family occupying it and the land should furnish supplies for the family. Such a single dwelling and the family occupying it constitute a household serving as an economic and social center. Economically this household is largely self-supporting and self-sufficient. Food supplies and raw products are obtained from the land, and the members of the household carry on the necessary manufacturing processes, both sexes sharing in the work. This household is also a social unit. It serves as a meeting place for neighborhood gatherings; it is the place where the young people have their parties and their good times.

Such may be called the colonial type of home, splendidly typified in Mount Vernon on the Potomac, George Washington's home. A visitor to Mount Vernon gets an impression of unity, completeness, economic self-sufficiency and social efficiency—an impression that it was a place which served admirably as a center of peaceful and restful domesticity. Popularly, at least, it serves as the standard, the ideal form of the American home. Possibly it enters, more or less unconsciously, into the minds of those of us who are interested

¹ Presented at the Seventh Annual Meeting of the American Home Economics Association, Cleveland, 1914. Dr. Cutler's address is given in part.

in Home Economics, and serves as our standard also. If it does, and to the extent that it does, we are handicapping ourselves professionally. We are selecting as our goal a past that is gone, and gone forever. We must concern ourselves with a new type, or types, of home, and we must consider a larger unit, a larger home. We must put into the meaning of *home* something of its old Teutonic sense when in the form "heim" it meant a village, or community.

In the colonial type of home the family was fairly stable. There was a well established sex division of labor. The women were engaged in all the domestic arts which now have, almost entirely, become factory processes. The status of women was not questioned; it was in harmony with the customs and traditions of the time. At the present time there is plenty of evidence that the family is far less stable, that it somehow or other is less satisfactory.

But there are two facts in particular pertaining to the American family, which greatly disturb many thinking people at the present time: the decrease in the size of families—the race suicide as it has been called; and the increase in the number of divorces.

The number of persons to a family in the United States was 5.55 in 1850. In 1900 it was 4.7, a decrease in 50 years of 16.07. In these figures the relatively large families of the immigrants are included. If we were to take the figures for the native element alone, the decrease would be much larger. There are two opinions about this situation, both held by people competent to draw conclusions:

1. It is to be regarded as a source of alarm. It is an indication of the beginning of racial degeneration. It is an indication of a tendency toward the disintegration of the family. Our primary and fundamental social unit is disintegrating.

2. It is not to be regarded as an indication of degeneration, but rather as an indication of a clearer recognition of the nature of the family—a clearer recognition of the responsibility of the father and the mother to bring up well a small family rather than to neglect a large one.

There is nothing abnormal about these facts. They are in perfect accord with what we know about the operation of the general law of population.

The increasing divorce rate in this country presents a serious situation. The number of divorces per 100,000 married population has increased from 81 in 1870 to 200 in the year 1900. Approximately

4 out of every 1000 married couples are now being divorced annually. With possibly one exception we have the highest divorce rate of all the countries in the world—probably it is very nearly, if not quite, the highest divorce rate in the world's history.

Various explanations are offered: various remedies are suggested. With none of these are we directly concerned in the present discussion.

There are some things that you cannot force a society to do, any more than you can force an individual to do certain things. You cannot by legislation, or by any form of compulsion, force men to be ambitious, to be energetic, or to be good and honest and true. No more can you by legislation compel a society to maintain an ideal marriage institution. A study of the history of marriage shows that this institution has in the past undergone many changes and modifications and it seems pretty clear that just now it is undergoing another notable change. Prominent as a factor in this change, perhaps the most prominent factor of all, is the new status of woman.

The marriage institution is distinctly a social institution, one that is controlled by the customs, standards and ideals of society. Its existence, its continuance and the terms on which the marriage relation may be dissolved, are really determined by the conditions of life, and the standards and ideals which characterize the society. If marriage is regarded as merely a social convenience, at a time when conditions are in many ways unfavorable to the maintenance of high grade family life, as is true at present, divorce, or something which is practically the same thing, will be common. If marriage has a solid basis in mutual interests for the parties concerned and is regarded as a holy union to be dissolved only by extremely unfavorable conditions for its continuance, then divorces and separations will be rare.

Woman as a *wife* is a conception not fully attained by everybody as yet. It really is a very modern notion. The word *wife* seems to connote a higher status, a position of larger responsibility in the household but after all, in fact, it has been interpreted as meaning a position with restricted authority. The wife is more or less of a *silent* partner; she may act as a representative of the firm up to a certain point and no further.

One of the points at issue at the present time is whether the wife shall be a full member in the joint partnership of the family. Many

of the women are refusing to be *silent partners* any longer. They are breaking the silence and the result is the modern woman movement. In the marriage institution we really have a case of antagonistic coöperation. Neither party wants to enter such a permanent relationship unless there are distinct advantages to be gained. And so it happens that there must be mutual advantages for the two parties in order that the marriage institution shall be stable.

Any change in living conditions must necessarily affect the stability of the family. New ways of earning a living make necessary a re-adjustment in the relations of the two parties in the marriage institution. At the present time a notable re-adjustment is in progress. A new alignment for the sex division of labor is being worked out. The entrance of women into wage-earning occupations gives them a stronger economic position and hence the terms of the marriage relation are being re-adjusted. There is some indication that woman will come to occupy the full status of a wife and will assume all the responsibilities which that position implies.

The fact that modern manufacturing plants can do the work of the domestic arts more cheaply means that the women cannot, if they would, all remain at home, spinning, weaving, making house furnishings and preparing meals for a family. A larger and larger proportion of the women must necessarily work for wages in factories, stores, and offices. And they are as a matter of fact entering practically all the branches of the modern factory system and the business world. They are also establishing businesses of their own and they are entering the professions.

In the census report of 1900 the detailed classifications of bread-winners, with respect to the kind of work in which they were engaged, distinguished 303 occupations. Women were represented in all but 9 of these occupations.

The facts of human history make us exceedingly cautious about saying there are some kinds of work which women are not fitted to do. In this connection one might well read the book by Otis T. Mason: *Woman's Share in Primitive Culture*. It is a standard authority and written by a man. One wonders, after reading that book, if the men did anything at all.

In 1900 one woman in every five was engaged in a gainful occupation, that is, working for wages or on a salary. Probably one in every four is a wage earner at the present time.

If the young women go out from the home to work for wages the tendency is to weaken the family tie. The young women come to feel more or less independent. They are less closely bound to the home and to their parents. Their social life no longer centers in the home. It centers in moving-picture shows, theaters, parks—public places of amusement. Hence it is necessary to exercise supervision over public places of amusement. We are forced to treat this matter of recreation nowadays as a community problem. If married women go out from the home to work for wages that seems to mean less care of the home, less care of the young children.

What is new about this situation is not that women are working. Women have always worked. The new fact is that women are working for wages; they are becoming wage earners. It was not so very long ago that men began to work for wages. Some important consequences followed that change. Now women are working for wages and still more important consequences are now beginning to be recognized. It is becoming apparent that a new type of home and of family life is necessary. The old is no longer possible.

The family is now in a period of transition, a period of re-adjustment. Most people are at present studying the symptoms of this transition. They are studying desertions and divorces, when they ought to be studying the marriage institution and the family. They are seeking a remedy for divorce, when they might much more profitably be seeking a new basis for the stability of the family.

Some hundred years ago the economic effects of what we know as the industrial revolution became noticeable and students began to be interested in a new science—political economics or economics. Somewhat later the social effects and consequences of the industrial revolution became evident and people became interested in *social* problems—this interest giving point and significance to the development of another new science, that of sociology.

We are just now becoming aware of the effect of the industrial revolution on the family and slowly we are coming to the realization that some changes in the form of the family are inevitable and necessary, whatever the cost. It is pretty clear that the cost will be heavy measured in human suffering and misery but we can scarcely doubt that the gain will overbalance the loss in the long run—unless we have ceased to have faith in humanity.

Then there are the changes in the form of the dwelling. An in-

creasing proportion of the population is coming to live under urban conditions, and in the cities the single dwelling is becoming surprisingly rare. For perfectly obvious and valid reasons the single dwelling is being replaced by terraces, double houses, flats, apartment houses and tenements—multiple dwellings of one kind or another.

Many families, possibly a majority of the families, are now living in these multiple dwellings—these new types of dwelling houses—owning no home and possessing no land. They have a right to use a balcony, a porch or part of a veranda, some stairs and a hall, a section of the basement—and the public streets. There is no place for the children to play, without disturbing the neighbors or obstructing the traffic on the streets.

There is little chance for peaceful domesticity. The streets are noisy. Some of the neighbors are amateur musicians. There are piano players and victrolas. Vacations are necessary in order to avoid nervous break-downs and these vacations must be spent away from home. Sundays must be spent away from home. There is no rest to be found at home. All must go away from home for their good times.

Many of the women living in multiple dwellings are living under conditions which do not permit them to work, that is, to contribute to the family income. The apartment house women are not permitted to work at anything worth while on account of the attitude of their husbands and of the social standards which prevail. They are occupying, perhaps we may say, the position of ornamental fixtures in the home. Their function in the household is apparently to make themselves indispensable luxuries and thus keep the family together.

The tenement house women do not have room to engage in work in their homes without endangering their own health and that of their families. But if the tenement house woman stays at home to look after the children she cannot really take care of them and give them the moral training which children used to get in the home. The children run the streets. There is nothing for them to do that is beneficial to them.

It is evident that the problem of satisfactory modern living conditions has not yet been solved, that the modern dwelling is not yet adjusted to the needs of the modern family. Some of these multiple dwellings in our cities are not fit for human habitation, to say nothing of maintaining homes in them. When people build

houses for other people to live in and maintain them as an investment for immediate dividends, these dwellings are not likely, in the ordinary course of human events, to be the best possible places for families to live.

We are learning that there is such a thing as public health and that it bears a vital relation to the health of the members of the individual household.

The relation of education, or of the educational system, to the family and the needs of the members of the family is also becoming clear. The boys cannot work with the father; the girls cannot work with the mother; they have no means of choosing or of learning a useful occupation. And so we are becoming interested in vocational guidance and vocational training. It is urged that emphasis needs to be given to the education of boys as homebuilders and income-earners, while girls should be educated as homemakers and income-spenders. There is little doubt that girls must be educated as income-earners also.

The moral training of the children also demands our attention. The home is apparently not giving the moral training that it used to give. The church seems not to be in a position to assume any larger responsibility in this direction. Shall the schools undertake to assume this responsibility more definitely and effectively?

In the matter of recreation we are facing a serious community problem, particularly serious because so few people as yet recognize that it is a community problem. In our dance halls and pleasure resorts the young people are seeking fun, which is perfectly normal and thoroughly wholesome, and they are being exploited for gain.

The conditions of employment are also to be given earnest consideration. We must concern ourselves about child labor and legislation with reference to the employment of women. We must know what the incidence of the risks of modern industry is upon the family and we must do our part toward the development of a proper and satisfactory system of social insurance. We ought surely to be in a position to point out the vicious nature of the ordinary industrial insurance.

These are all community problems. Home Economics seems to bear a vital relation to these questions. We shall not get a satisfactory modern home without, in a measure at least, solving these problems satisfactorily.

The opportunity that lies before this association seems to be an unusual and exceptional opportunity. No one is professionally interested in the solution of the problems of the modern home, except the members of this Association.

The sociologists are professionally interested, it is true, but mainly in a general and theoretical way. You are interested in the practical side. You have an opportunity to bear an important part in the development of community housekeeping as well as in Home Economics in the narrower sense.

ART IN THE HOME¹

ANNETTE J. WARNER

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The subject of Home Economics has been efficiently organized under the three heads Food, Shelter and Clothing. The poorest person in the United States must have food, shelter and clothing; the great middle classes are chiefly concerned in one way or another with food, shelter and clothing; the multimillionaires, far from becoming independent of these, find in food, shelter and clothing a principal outlet and the outward symbol for their constantly increasing wealth—richer food, more magnificent shelter, more gorgeous raiment. Among poor, well-to-do and wealthy there are those who feed, some who eat, only a few who dine; there are many who are barely sheltered, some who are comfortably and even luxuriously housed, but comparatively few who really live in homes; there are many whose clothes serve chiefly as covering, many who are amply clothed for all purposes of warmth and many of display, a few only whose dress is the outward expression of an inner harmony. The difference between feeding and dining, between shelter and a home, between clothing and costume is not one of quantity, of outlay or even of degree, but a subtle and important quality which lifts them from the realm of mere physical necessity into one where the spirit also is refreshed.

One who attended the Cornell meeting of the American Home Economics Association must have been deeply impressed by the pur-

¹ Presented at the Seventh Annual Meeting of the American Home Economics Association, Cleveland, 1914. Miss Warner's address is given in part.

pose, earnestness and enthusiasm of the speakers, the wonderful utility, efficiency and science in the methods by which they planned to do the daily work in every little group which centers about a home and in the larger groups where home is spelled with a capital H, in municipal and in national housekeeping. One marveled at the steps to be saved in houses rationally planned, the health to be conserved by well-balanced meals, the advantages in money and morals to result from ethically and economically planned clothing. There seemed to be only one thing lacking in this well begun, three dimensioned structure of Home Economics and that was a sort of fourth dimension which would extend it into that realm where man does not live by bread alone. This fourth dimension is not in the nature of a superfluous or supplementary adjunct to be affixed after people are well fed, adequately sheltered and comfortably clothed, but an integral and component element which should inhere in the structure from its foundations, a quality which should permeate it like an atmosphere. This realized, we should joyfully observe all the laws of health in order to make the body a fit abode for the human spirit, as did the old Greeks; we should naturally learn to clothe it becomingly and appropriately; we should build worthy homes and furnish them simply and beautifully that they might be the dwelling places of contentment and harmony.

One of the best things accomplished by Practical Art Schools and Home Economics Departments has been the dignifying of all the homely work of housekeeping by raising it to the level of a science.

Now can we not further glorify it by accomplishing what Murillo suggested in that old picture of a Spanish kitchen where white robed angels are represented in the act of washing pots and kettles in such a fascinating way as to make it seem like a naturally angelic occupation—do for it what Millet did when he showed that labor was not a curse but a necessary and beautiful part of the divinely ordered scheme of the universe. To his eyes the peasants of Barbizon working in the fields sowing and planting, tending their flocks, baking and churning, feeding their chickens and their children were links in the great nature rhythms of labor which swing the old earth in her orbit from seedtime to harvest, day to night, season to season. One might wish there were some different word than art to express this quality, for art always seems to scientific people an unpractical thing. But beauty was born of utility long, long ago. The shape of a tool, of a

column, of an arch may have been determined with a view only to use, but the most economic and strongest form is always found to be the most beautiful. Art marks the eternal distinction between drudgery and work. The conclusion which must follow from this truth so ably defended by William Morris and others is that no human being can be satisfied and happy in an activity which fails to call into play his desire to express himself and his native instinct for the beautiful. "The art in a thing is the living expression of the joy of a man in his work." "Art is the doing whatever has to be done in the best way in which it can be done."

To have art in the home and in Home Economics it is necessary that homemakers should be taught that appreciation of what is fitting and beautiful which we call good taste. Any person of ordinary intelligence is able to develop power to select with good taste the furnishings of a home and the clothing for a family. Such power is a growth, however, not a product, and is not to be acquired in a day. The training of this power should begin in the public schools, for the homemakers of tomorrow are in the public schools of today. To this end even the little schoolhouse should be one of the best buildings in the town with well cared for grounds. The schoolroom should be large, well lighted, well ventilated, with restful color on the walls.

There should be books, pictures and casts so that poets and artists may act as interpreters of the beauty everywhere present. Every morning there should be some beautiful thing brought to the attention of the children and interpreted to them—perhaps the morning itself bright with sunshine or beautiful with clouds, wonderful in the tender color of the springtime or gorgeous with the brilliant color of the fall, or a poem, a song, a picture or a flower, a cup, a pitcher, a bit of handwork, any common thing glorified with the touch of beauty. Their minds should be filled with beauty, for as Emerson says, out of nothing nothing comes.

Almost every problem connected with the building and furnishing of a house is also an art problem. The selection of a site and the choice of the architecture best suited to the site is a matter calling for a trained taste. A house should be in such harmony with its environment that it seems a natural outgrowth, and if for any reason it were to escape from its moorings one should be able to decide whether it properly belonged on a town or village street, in a level or hilly landscape, in a rocky pasture or on a sandy beach,

whether it had been surrounded by trees and gardens or had been standing in bold relief against sea or sky. The house would proclaim, in its structure, its purpose, and not leave one in doubt whether it were a really truly modern house or an old colonial mansion surviving with the stately inconveniences of '76, or an imported Jacobean manor house brought up to date and unwillingly naturalized. Art training would determine the material of which the house should be built and dictate the color of the outside so that it would harmonize with the landscape at every season of the year. Such color would be always near neutral, the soft grays and browns of weathered wood, of the stones, earth, tree trunks, or other natural objects in the vicinity colored by the brush of the great colorists, time and nature.

The planning of the interior is another art problem. Every homemaker should understand what considerations govern economy in the arrangement of the working, living and sleeping space in a home so as to produce the greatest possible efficiency, comfort and beauty. This does not mean that she should become an architect, but merely that she should be able to work intelligently with the architect in the building of her own home. It would enable her to secure rooms of beautiful proportions, agreeable division of wall spaces by doors and windows, harmonious relation of lines in windows, doors, picture mouldings and built-in furniture; to avoid the inconvenient and unbeautiful placing of steam coils, ventilators and lighting fixtures which often are located as if with malicious intent to spoil the very best spaces in the room.

Every homemaker should cultivate a discriminating taste in color. Color is the vehicle which conveys to the mind every idea which reaches it through the eye. There is no more important consideration in the furnishing of a home than that of color. There is nothing so bad in the way of furnishing in a home but that beautiful color will do something in the way of obviating its defects and atoning for its crimes; there is nothing so good in texture or design but that bad color will more than nullify its virtues, it will even render it a discordant note in the room like "Sweet bells jangled out of tune and harsh." Color makes the atmosphere of a house. Whether one is conscious of it or not color gives the first impression as one enters the room. It has been proven by psychology that some colors are soothing, others irritating, some produce cheerfulness, others despondency. Color has the power to increase the apparent size of a

room, to make a room actually lighter, or to subdue a too glaring light. The tendency of late to make all the rooms in a house or on one floor of the same color works toward a unity of effect which is one of the first requirements in a work of art. This is especially desirable if the rooms all open into each other. It is possible to give a pleasing variety even while using only one color. If, for instance, yellow were the color chosen, the walls in a room with a northern exposure might be colored with a not too dull yellow; a dark hall or less well lighted room with a lighter and brighter yellow; while the living room might be colored with a medium value in a tone approaching gray or with a shade of yellow which would popularly be called brown. The dining room might be varied by a two-tone design in a stripe or a figure and in the kitchen with its black stove there might be added to the yellow walls, dull terra cotta tiles with a white line so as to reproduce the color scheme in an old Greek vase. Exposure in lighting must always be considered in determining color schemes. Rooms with a northern exposure call for the warmer colors. In rooms with a southern exposure cooler colors may be used. The woodwork must always be a determining factor in selecting the color in a room. If the room is finished as far as the woodwork goes the furnisher is no longer free. The walls must harmonize with the woodwork by analogy or contrast. If the woodwork is to be painted the range of possibilities is greater, and many most harmonious effects may be obtained inexpensively if the painter is also a colorist. Apparent size of rooms may be increased by matching paint to the paper.

The walls, ceiling and floor are the backgrounds for furniture, hangings, pictures and the scenes of family life enacted against them. It is the province of a background to stay back, to play a subordinate though very important part like the accompanist in a vocal number. If home furnishers would remember this law of backgrounds, all gaudily hued, naturalistically or obtrusively-figured, aggressively-striped wall papers would be banished from the market. None would be manufactured and thus one temptation to the indulgence of a perverted or untrained taste would be removed.

If every homemaker had a trained taste she would realize the beauty and restfulness in unfilled spaces and would have no pictures that were not selected with the deliberation with which one selects a life long friend. These she would frame in accordance with the character of the picture, and in the room and space to which they

were best adapted hang them on the level with the eye flat against the wall or by two cords which would continue the lines in the frame and harmonize with all the other vertical lines in the room. She would select draperies for doors and windows which should make them adjustable parts of the wall surface of the room or they should be of such interesting design and beautiful and harmonious coloring as to serve as decorations instead of pictures. The folds of these draperies would hang in vertical lines harmonizing with the structure of the room. The colors and possibly the design in walls or hangings would be repeated in the upholstery of furniture and in quieter, lower tones in the rugs upon the floor. In the home where art is a land-maid the rugs will not lie at sixes and sevens upon the floor as if the wind had blown from all four points of the compass at once but in orderly fashion with due attention to each other and to the lines of the room.

Every piece of furniture should be selected to fulfill a purpose for use or comfort, should be well and sincerely built of as good material as may be and on good lines. Every bit of decoration on a piece of furniture should be questioned. Does it emphasize or refine the construction or is it added after the construction is complete? A fine moulding following the edge of the mantelpiece, or a finely carved bed post is decoration. A bunch of acanthus leaves or a cupid's head stuck on in the middle of a frieze or a curved knot of fluttering ribbons or a garland of flowers on the head board, is ornament. Good taste dispenses with ornament. Every piece of furniture should have but one use. Beware of a bureau which masquerades as a chest of drawers by day and a bed by night, of chairs which are step ladders, of a mirror which is also a hat rack.

Expense is not a necessary condition for beautiful homes. An ounce of taste will go farther than a pound of money. William Morris once said, "Art was not born in a palace, rather, she fell sick there."

The homemaker with trained taste has in garden and field a treasure house from which she may select at any time of the year subjects for art compositions which shall be sources of constant delight and inspiration to her household. The living room and dining room should be the scene of a pageant of flower arrangements marching in endless succession through the year. Every principle of design and color is applicable in flower arrangement. Some plants are beautiful for grace of line or for the perfection of a single blos-

som, others for clusters of bloom or for their color. The former should be arranged singly or in small groups so that their particular beauty is seen to best advantage, the latter may be composed in masses. A single rose or a pond lily floating in a bowl of water, one stalk of eastern lilies, three poppies or chrysanthemums, a bowl of nasturtiums or pansies, a glass of sweet peas, a single plant of field violets or hepaticas will furnish enough of a feast of beauty to glorify a simple meal. Nor are these possibilities exhausted by the coming of frost. The brown sedges, the seed packs, berries from the bitter sweet and black alder, the gray green boats of the milkweed gathered when the winged crew are just ready for flight, the many evergreens and countless other subjects furnish endless possibilities for beauty to be had for the trouble or pleasure of gathering. A simple and safe rule in the arrangement of flowers is to use only one variety and to arrange them so as to show the natural growth of the flower. In the arrangement of several single flowers or of masses of flowers there should always be one dominant flower or mass with subordinate flowers or masses related to it. Every homemaker should have a collection of flower receptacles. These need not be expensive, indeed, they should never compete in attraction with that which they are to hold. In form they should repeat or contrast the lines of the plant forms and in color be entirely neutral or echo the color in the plant in grayer tones. Clear glass showing the stems of the plants is a good choice for many arrangements and may be procured in a great variety of good shapes for little money.

In every home the homemaker is the supreme center of interest. Her standard of taste is an all-powerful influence. Therefore she should be always appropriately and becomingly dressed and with judgment and taste be able to select the clothing of the family. Clothing in its largest sense is not merely a personal problem, it is a national problem. It is a part of that much discussed problem of the cost of living, of woman's wages, of wasteful industries. It has to do with the social evil itself. Its right solution means not only better and more beautiful women but more stable industries and a finer social life. Therefore, because of its far reaching, social and economic relations, every woman should devote to it that serious and orderly thinking with which one approaches important problems. An instinct for clothes is second nature to woman. Clothing was the first necessity impressed upon her after her first lesson under the

apple tree. The part clothing has played in economics in the history of the nations from the very beginnings to the present it would be impossible to estimate. In its art aspect it offers, like home furnishing, a most practical field for the application of all the principles of design and color. Training along these lines should begin in the public schools in the making of doll clothes, selection of hair ribbons, ties and other accessories according to some scheme of color or design and should continue through college and be an essential part of every course in Home Economics.

A clever writer has said that "In the merciful scheme of nature there are no plain women." If every woman would studiously make the best of herself physically, mentally, spiritually, artistically, there need be no unattractive women. It is no unworthy study to learn to make the most of and to do justice to one's self. If you cannot write a poem or paint a picture you can perhaps be one.

Every woman should know her own color scheme, select colors that are becoming to her and remain true to them until with change of color and graying hair an entire change in color scheme is imperative. She should realize that color is of the first importance and that no woman unless a brilliant beauty in her prime can afford to wear a whole dress of color of more than one-half intensity and then only by artificial light in the privacy of her own home or as the brilliant dominant decoration of a festive gathering.

Clothes are never just clothes; they have relation to a great many other factors in life and a trained taste will lead to considerations of dress in these relations. No woman can afford to dress for herself alone but must consider her position, her business or profession, her purse, her own appearance and the occasion. When all home-makers have trained taste each member of the family will be appropriately and becomingly costumed.

Art in the home will manifest itself in countless other ways; it will make our living more simple. It will banish to the scrap heap all insincere, pretentious, over-decorative furniture with fat upholstery, all poor, gaudily framed pictures, all collections of meaningless junk which fill our mantelpieces and sideboards; it will bring about an orderly arrangement of all the belongings of the house, for order is not only Heaven's first law and the first law of the good housekeeper but it is the first all-inclusive principle of art. The other laws such as balance, rhythm, harmony and the others being but phases of it.

When art is incorporated in the home and in Home Economics we shall be moved to pray as did Moses of old with assurance that our prayer will be answered: "And let the beauty of the Lord our God be upon us; and establish thou the work of our hands upon us; yea the work of our hands establish thou it."

THE OLD AND THE NEW

In the charming story¹ by Mrs. Henry de la Pasture, *The Honourable Mrs. Garry*, we are in one chapter taken with the heroine to call on a poor, decrepit old widow named Bence who has understood most of what she has seen in her restricted life, and who, as she philosophizes to the London society woman, manages to hit several economic nails neatly on the head. Her ideas regarding Board School training and the "good old times," for example, really drive home points around which much discussion has raged in pedagogic and sociological circles.

She is talking about her granddaughter Emily who lives with her.

"Em'ly does what her can, but I makes no account of her cleaning. 'T is well known they Bard Skules [Board Schools] ruin our maidens for house-work as well as for manners and obejence. 'T is along of these 'ere young youths and fly-by-night moppets as is set over the children nowadays; being themselves onripe in wisdom though forward in the getting of scholarships."

"In course the children sarces them, as they wudent durst sarce old witty ancient teachers, who'd make them mind their betters and their beyaviour. My Em'ly be vast enough to tell I that my speech be turble ignorant, and so I'll allow it may be; but can her bake or mend or cuke as I can? Why, she can't so much as scarld the milk wi'out scarching the pan. A fine wife her'll make the girt vule who weds her if such a one she ever finds."

"My old man used to say as the railways, having turned everything topsy turvy since his grandfather's days, he thart as how the folk was still mazed with the suddenness of it arl. But this be sartain, that good's come out of the changes for us, and the poor be better off than they was. Luke at us. Brart up 'leven children on eight shillings a week. My old man boasted on't, but I got a long memory so well as a long tongue, and I bain't forgot the cold, nor the hard work, not the taste of turmot [turnip]

¹ *The Honourable Mrs. Garry*. By Mrs. Henry de la Pasture. New York: E. P. Dutton and Company, 1912, pp. 228-236.

mash, as we've sat down tu for a meal many's the time. My sons and darters hasn't never had to set that befar their little ones, and thank God for it. Why, my youngest grandson, as can't mow in a week what my old man cude mow in tu days at his age, gets eighteen shillin' a week."

"The prices of everything have gone up, I suppose?" suggested Erica.

"Some has gone up and some has gone down, miss," retorted the old woman. "'T is the wants as has gone up, and pondering, I've come to see as us that be old must be patient wi' the mistakes of them as be young and struggling to get a foothold above the place where us was forced to bide. In every scrimmage there's bound to be damage done, and if they've throwed down a lot of things as experience has tart us to prize, along wi' the burdens as was bound on our backs, why, you may depend on't they'll pick those up later when their place is firm. They've gained more than they've lost, 'carding to my notions."

Again, when her rather cynical visitor has suggested that life is mainly a scramble after what you want for yourself, she tells of the life of her husband "as done his duty arl the days of his life," and then goes on:

"There bain't no scramble about that; 't is a steady fight, under arders. Us as is old, knows as the need of discipline be the first crying need. Tu o' my sons be soldiers, miss, as has telled me what discipline can do for the worstest of the worst, and says I, 't isn't only in the rigiments they find out that. Us has arl got tu 'bey arders and reg'late our time from the King on's throne as must be here and there 'carding to the clock, tu the labourer as can't keep the cows waiting past milking-time. And each of us has got tu know his place in the world and keep it stiddy, and du the best he can tu better it 'carding tu's powers. 'T is the young and the idle as listens to vule's tark about arl men being equal."

"And you disagree?"

"Be I a vule?" asked Mrs. Bence, heatedly. "Arl men equal! Be there one of my grandsons as cude ha' held up his head alongside my old man at their age? Why, 'a cude have lifted any one of them up in's tu hands, and dashed un's brains out against the flure. Be one of them so witty and cunning as he were tu know the ways of the birdses and the beastses, nar tu du the thatching in's spare time? Be Em'ly *my* equal as buys ready-made blouses and wears holes tu ready-made stockings? And lays abed in the marning and sits up nights wasting candlelight over they novelettes till her silly eyes be only able to blink at 'ee through goggles, same as my grandmother at eighty-vour? And her twenty year old, by which time I'd borne and nursed dree byes, and gotten the stiddiest man, and happiest home in arl Westacombe for my own. Equal! Why, my dear soul, there bain't tu men even in thiccy village as you could even with each other. God Almighty made men as different as He made trees and cattle, in

strength and vally and looks. They knows better than tu tark such non-sense tu I, but when they cries about the labourer being worthy of his hire, then I listens and says, 'Now yu 'm tarking clean sense.' Us has lived tu hard and worked tu hard, back along, and 't is time things were arltered; and they be arltering, day by day."

"But the day be coming, if it bain't come," said Mrs. Bence, with glittering eyes, "when the workers will be paid to the uttermost farthing, gude measure and running over—and that's where I'm hoping that they Bard Skules be going tu help them as will come after us, when they got past their ignorant mistakes at starting. Us as is far-seeing must be patient till their common-sense begins to work and makes clear to them as 't is no use setting the blind to lead the blind. They'll find out yet as 't is witty well-mannered experienced folk, commanding fear and reverence, as must be axed to teach children, and not vulgar, flighty young things as knows no better than tu mock at the mother as bore them in pain and reared 'em in patience—or their father as sweated in summer and froze in winter to get their bread. Miss, as I sits here my blood boils to remember as my Em'ly when her got her scholarship over tu Bursdon, crossed the road because her saw her own father, as had been after a whitewashing job, coming along, and thart as he'd shame her befear her schoolmates. Her made believe not tu see un. When I heard on't I told her father tu take a stick tu her, but he says 'Mother, 't is ignorance. Life will teach her better. Doantee be hard. The maid be tu full of buke larning to mind manners.'"

"'Manners maketh man' as our old parson used to preach, and many a tell he's had wi' me about the respect us should have one tu another. But them as hasn't got can't give, and think of my Em'ly set up to teach a parcel of little innocents—."

"Will *her* teach them what manners mean, or gratitude, or learn them not to be ashamed of honest work?" she asked passionately. "But I bides my time in patience, for I says, gude will come out of arl, and the change be but beginning. Presently them as works for us will see so clear as I do sitting pondering over it arl, after seventy year toiling in the thick on't. And I see as presently the children will be tart as character stands even above buke-learning, and that 't is only vules as be ashamed of work; for lookee here, miss, honest work makes honest men, and there's none so quick as workers tu find out as there's no equality under the sun; and tu show who can teach the rest, and who's a bungler, and band together against the shirkers and the drinkers, and make laws against them and learn them to obey, and choose the best man for their leader and stand by him and one another true and loyal."

WELFARE SERVICE IN AN ENGLISH INSURANCE COMPANY

F. J. CROSS

This attempt to improve the nutrition and the general comfort of employees of a large institution is thought to be of value from a social point of view, although no attempt is made to give the nutrients or cost of the luncheon.

The Prudential Insurance Company of London, founded in 1848, is an entirely unique institution. From small beginnings, a tiny office, a handful of clerks, it has increased in less than half a century to an office of colossal dimensions with a reserve fund of over £86,000,000, an income of £16,000,000 a year. The 1500 men clerks take their meals outside the building, but there are 1750 women clerks, for all of whom a substantial meal is provided at mid-day and tea for any that may stay in the evening.

They are on duty from 10 to 5 and during those hours none leave the premises without the express permission of the superintendent. This system has been found by experience to work remarkably well. There is ample provision for their comforts inside, whilst on the roof is a vast recreation ground which is a scene of much animation in fine weather. An hour is allowed for the mid-day meal and relaxation. A result of this admirable system is that the absences from ill-health of the girl clerks is rather less than that of the young men.

A test was recently instituted by comparing the records of attendance of 250 youths, 17 to 21 years of age, and the same number of girls of similar age and the girls came out first.

Unlike the Bank of England system, by which the meal for women clerks is provided free, or the Post Office Savings Bank system which is coöperative, the Prudential plan is neither entirely gratuitous nor entirely contributory, but the margin between cost and receipts is bridged by the company.

The employees of this company, we understand, receive the usual pay of such workers in London.

The system of catering is excellent and up-to-date. On the occasion of my visit, I was invited to see the preparations from start to finish and was impressed by the thorough manner in which each of the culinary operations was performed.

The latest labor-saving apparatus was everywhere employed, as machines driven by electricity for knife-cleaning, apple-paring, and potato-peeling. In the latter the potatoes are rotated against whale-bone knives which pare off every bit of skin but leave the potato intact. No hand touches the plates when they are washed. They are stacked in baskets which are in turn placed in a machine that washes them thoroughly and delivers them dry to the attendant. Everywhere there is perfect cleanliness and neatness.

Although more than a hundred large joints were in the ovens, with a great number of puddings and tarts, although various kinds of soup were being prepared, and vast quantities of vegetables were baking or boiling and the time was approaching for the mid-day meal, yet there was no sign of haste. All the operations were being done with precision. Many eyes were on the watch to see that the various dishes were done to a turn. The tables were covered with spotless table linen; plants were on every table. When the first party of 500 to 600 appeared, sixty or seventy waitresses assisted in the distribution of the courses.

The prices for dishes are about half the prices for which articles of the same quality could be obtained outside. For 4 cents an excellent plate of soup is supplied; an ample cut from the joint costs 6 cents; vegetables, 2 cents; puddings or pastry, 2 to 3 cents. As to fish, an excellent kipper can be had for 2 cents or cod-fish for 4 cents. More expensive fish-dishes such as salmon, can be had at 6 cents. Bread, butter, and cheese cost 1 cent each. So that a lunch consisting of soup, or fish, and meat with vegetable; or meat with vegetable, pastry and bread and butter; or soup, fish and pastry and accessories can be had for about 12 cents. Tea is provided at similarly moderate rates for any of the girls who are staying.

Occasionally in a busy time, they continue at work after 7 o'clock, but no one is supposed to do so, and staying for more than two nights a week is discouraged. When work is continued for two hours after 5 o'clock, half an hour is allowed for tea, and an allowance of 12 cents is made for its cost, whilst for half that sum, refreshment, consisting of bread and butter, or buttered toast or cake, with a cup of tea, can be procured.

BUREAU OF HOME ECONOMICS, NEW YORK EDISON
COMPANY¹

The work of the recently established Bureau of Home Economics of The New York Edison Company was the subject of an interesting exhibit at the Electrical Exposition in New York last October.

There were two displays devoted to foods and their relative values, and rather a comprehensive demonstration of the various electrical appliances designed for use in the home.

One of the food exhibits was loaned by the American Museum of Safety. Glass vials were shown, illustrating graphically the constituents of the various foods. A printed chart showing the relative energy value obtained for ten cents was distributed among the visitors to the display. The other food exhibit was loaned by the Government and was accompanied by a chart showing the composition of food materials. This too was for distribution.

The display of electrical appliances was grouped according to the designated use of the articles. For instance, under the heading of bedroom supplies were shown heating pads, curling irons, a hair dryer, a vibrator and a nursery milk warmer. For the dining room were shown a toaster stove, a chafing dish, a percolator, a tea samovar, a table range, a soup tureen and a hot plate. On the breakfast table were a toaster, an egg boiler, a coffee pot, a grill and an electric water cup. The kitchen equipment included an electric fireless cooker, a double boiler, a frying pan, an egg beater, a plate warmer and an electric refrigerator.

This unusual exhibit aroused great interest among the various schools in Greater New York and hundreds of students and many prominent teachers registered. The exhibit was in charge of Miss Anna M. East and Miss Ina J. Zimmer.

Miss East has compiled a partial list of household electric supply manufacturers that would no doubt prove useful to teachers and housekeepers elsewhere.

The list follows:

The Acme Electric Heater Co., Detroit, Mich.; The American Electrical Heater Co., Detroit, Mich.; The Berkeley Electric Cooker Co., 1932 Centre Street, Berkeley, Cal.; The Comet Electric Stove Co., Detroit, Mich.;

¹ See frontispiece.

The Copeman Electric Stove Co., Flint, Mich.; The Current Electric Co., 18 E. Kinzie Street, Chicago, Ill.; The Cutler Hammer Co., 50 Church Street, New York City; The Detroit Fireless Stove Co., Detroit, Mich.; The Electric Dishwasher Co., 42 Pearl Street, Buffalo, N. Y.; The General Electric Co., Schenectady, N. Y.; The Helion Electric Co., Newark, N. J.; The Hot Point Co., Ontario, Cal.; The Hughes Electric Heating Company, 211 West Schiller Street, Chicago, Ill.; Landers, Frary & Clark, New Britain, Conn.; The Manhattan Electrical Supply Co., Jersey City, N. J.; The National Electric Utilities Corporation, 355 West 36th Street, New York City; The Phelps Mfg. Co., Detroit, Mich.; The Prometheus Electric Co., 232-234 East 43rd Street, New York City; The Rochester Stamping Co., Rochester, N. Y.; The Rutenber Electric Co., Logansport, Ind.; The Simplex Electric Heating Co., Cambridge, Mass.; The Wage Electric Co., Chicago, Ill.; Wells, Mowbray & Newman, 125 West 42nd Street, New York City; The Westinghouse Electric & Mfg. Co., East Pittsburg, Pa.; The Vulcan Electric Heating Co., Buffalo, N.Y.

HOUSEHOLD AMMONIA AN ECONOMIC ABSURDITY

J. F. SNELL

Macdonald College, Quebec, Canada

How much the housekeeper suffers from commercial frauds it is difficult to determine but that she does suffer is not open to question. In the matter of foods and drugs, Government protection of the buyer is now the rule in civilized countries. In the United States and Canada, our efficiently organized governmental departments of agriculture afford the farmer protection against fraud on the part of dealers in fertilizers, feeding stuffs and the materials used in the warfare against plant diseases and injurious insects. Is there any reason why similar protection should not be afforded the housekeeper not only in respect to foods and medicines but also in respect to textiles and in respect to detergents and disinfectants.

In the United States some progress has been made in the direction of securing legislation against fraud in the textile trade. In Canada this most important problem has not yet been attacked.

It is a problem of some difficulty. The textile industry is an exceedingly complicated organization and it is no easy matter to frame laws concerning it, which shall be both equitable and enforceable. Nevertheless in the interest of the home and in the interest of honesty

in business the problem must be grappled with and a satisfactory solution found.

The second class of household commodities referred to above, the detergents and disinfectants, are unquestionably much easier to control. From a chemical standpoint these materials are comparatively simple. Consequently the detection of fraud is in many instances a very easy matter. A little investigation made at Macdonald College may serve at once to illustrate the conditions existing in Canada in respect to these household materials and to suggest to workers in household chemistry elsewhere a line of investigation which is both easy and fruitful. Practically all the experimental work referred to in this contribution was done by young women without special training in chemistry—second year students in household science.

We purchased bottles of "household ammonia," of as many brands as we could find, measured their contents, determined by titration the quantity of ammonia gas they contained and calculated the cost of one pound of the gas in each brand. We found that bottles of clear household ammonia retailing at 10 cents varied in capacity from 300 cc. to 450 cc. and in ammonia content from 1.67 to 3.68 grams per 100 cc. One brand selling at 12 cents contained 415 cc. of liquid with only 1.64 per cent of ammonia gas (grams per 100 cc.). Two brands selling at 15 cents were distinctly superior to the cheaper ones and proved decidedly more economical when their actual ammonia content was taken into consideration. One of these bottles contained 475 cc. of liquid having 6.14 grams of ammonia gas per 100 cc.; the other contained 400 cc. with 7.15 grams per 100 cc. The retail cost of one pound of ammonia gas was for these two higher-priced bottles \$2.33 and \$2.38 respectively. In the ten-cent bottles it ran from \$3.08 to \$6.04, while in the twelve-cent brand the ammonia gas was costing \$6.67 per pound.

Besides the clear ammonias we found on the market a number of brands of cloudy ammonia. The "cloudiness" was found to be due to soap. These turbid ammonias were, as a rule, stronger preparations than the clear brands. The weakest contained 4.79, the strongest 10.92 grams of gas per 100 cc. The bottles were of capacities similar to those of the clear brands, and the prices were higher—sufficiently high to bring the actual cost of one pound of gas to about the same level as that of the clear brands. The most economical of these was

the second strongest, the least economical the third strongest, the cost of a pound of gas being for the former \$2.88, for the latter \$4.38.

We thought it would be of interest to compare the cost of one pound of ammonia gas in these "household ammonias" with that in concentrated ammonia, such as can be obtained from druggists. From the housekeeper's standpoint it would no doubt be most useful to have this comparison also on the retail basis. We made it on the wholesale basis. At the time of our investigation concentrated ammonia sold at wholesale in Montreal at 8 to 9 cents per pound. This was found to be equivalent to 33 to 39 cents per pound of ammonia gas. The wholesale prices of the bottles of household ammonia were 90 cents per dozen for the ten-cent, and \$1.25 per dozen for the fifteen-cent, clear brands, and \$1.60 to \$4.10 per dozen for the cloudy ammonias. These prices were found to be equivalent to \$1.62 to \$4.54 per pound of ammonia gas, that is to say, from 4 times to 14 times as much as in the pure concentrated ammonia of the drug trade.

The cost of the gas in household ammonia at retail, it will be noted, is from 6 to 20 times as great as its value in pure concentrated ammonia at wholesale.

Is it fair to compare values on this basis of the cost of the ammonia gas? From the consumer's standpoint it most certainly is. It is the only proper basis of comparison, since the gas is the only valuable constituent. The soap in the cloudy ammonia ought perhaps to be excepted from this statement, but its quantity is so small as to be insignificant. In no case did it amount to over one twenty-seventh the weight of the ammonia gas.

Concentrated ammonia diluted with six times its volume of pure soft water will yield a product better than most of the commercial brands of household ammonia. Why, then, should not the housekeeper make her own household ammonia? What service does the household ammonia industry perform? Does it amount to anything more than bottling soft water and shipping it about the country? Bottling, packing and shipping water involves, of course, considerable expense and the consumer eventually pays for this absurd and useless operation.

"But," it may be asked, "is not concentrated ammonia too disagreeable and even dangerous a material to put into the hands of the ignorant women who do most of the work of house-cleaning?" Familiarity with the material, we reply, would soon do away with any incon-

venience or discomfort in its use. *Danger* is practically out of the question. Besides, the diluting of the concentrated ammonia to household strength need not be left to the most ignorant member of the household. It could be done once for all as soon as the concentrated liquor is received. Common sense would suggest doing the work in a draught, for instance in front of an open fire-place or in an open window on the leese of the house. The knowledge that ammonia gas is much lighter than air would suggest holding the bottles above the level of the eyes. If this precaution is observed the diluting can be done anywhere without reference to the direction of the draught.

In addition to the two variations of liquid household ammonia there is in Canada (and doubtless also in the United States) a powdered solid offered for sale as household ammonia. The brands of solid household ammonia we examined were all found to be untrue to name. Carbonate of ammonia is surely the only solid material entitled to be called "ammonia," and it is no doubt the presence of this salt which the labels are designed to suggest. Yet none of the six samples we examined contained as much as ten per cent of commercial carbonate of ammonia (30 per cent NH_3). One ran as low as two per cent. The chief constituent of these so-called "household ammonias" is washing soda. And not only so, but it is apparently a poor grade of soda. We found in the household ammonias from 3 to 13.5 per cent of sodium sulphate—a substance which *precipitates soap* and is therefore less than useless as a detergent. The wholesale cost of the materials in a five-cent package of solid household ammonia was found to be between one and one and a half cents—and some of the material worse than useless!

With disinfectants we have done little, but one experience is worth relating. We found on sale in a department store in Montreal a "Rapid Cleaning Cartridge," which claimed marvellous potency in the cleansing and disinfection of sinks and drains. This material, sold at a substantial price, proved to be simply common salt, colored with less than one per cent of potassium permanganate.

We should be glad to hear from workers who have conducted similar investigations elsewhere or who contemplate undertaking work of this or a similar nature. Investigation must pave the way for reform.

DOMESTIC ART EQUIPMENT IN PAWTUCKET, R. I.

FLORENCE A. WARNER

Supervisor

The domestic art equipment for Pawtucket, R. I., High School was purchased a year ago and, as it has proved satisfactory, a brief description of it may be suggestive to teachers who are planning the furnishing of a similar room for high school use.

Our room is not ideal either in location or in size but has sufficient light and accommodates comfortably a class of twenty-four students.

Our tables were made by the Milton Bradley Company of Boston and the chairs were purchased from the same concern but additional tables and cabinets have since been built by a local firm. The tables are of soft wood, 54 inches long, 30 inches wide and 28 inches high. In each side are two drawers 16 inches by 12 inches and 3 inches deep, divided into two compartments by a partition running from front to back. Across the middle of the drawer from left to right is a steel rod $\frac{3}{16}$ inch in diameter resting in grooves at each side of the drawer. On it are placed the spools of thread and emery ball. The drawer contains the individual equipment—shears, scissors, tracing wheel, tape measure, twelve-inch rule, pincushion, and needles. The chairs are kindergarten teacher's chairs, cane seated, 16 inches high, 2 inches higher than the stock chair known by the above name and 2 inches lower than the ordinary chair. They are comfortable not only at the tables but also at the sewing machines.

The cutting tables are 6 feet by 3 feet, and 32 inches high and have folding legs which enable us to keep tables in a small space when they are not needed in class work. We have just acquired a stoutly built table 2 feet square and 16 inches high to be used as a platform by the students when skirts are to be hung. Its cost was much less than that of the commercial platform and, equipped with a hem marker, its value is just as great. A wardrobe $6\frac{1}{2}$ feet high, $7\frac{1}{2}$ feet long, 22 inches deep, and having a wooden pole running lengthwise through it 4 inches below the top gives space for hanging garments.

At present we have no locker room and no place for one. Consequently some sort of container for unfinished work had to be devised. Each girl has a firm bag, 24 inches by 18 inches, with featherbone and drawstring in the heading, and labeled with her name and the name

of the class. These bags are used by sewing and millinery classes and are hung in a cupboard 6½ feet by 5 feet by 20 inches.

We have been somewhat handicapped by the limited number of sewing machines (only two), but we expect to have at least one more this year.

Water for sponging or steaming is heated over a one-burner gas plate as are the irons used for pressing. An ironing board and irons, two dress forms, one long mirror and one small mirror complete our equipment. With it our classes have found it possible to work successfully.

REPORT OF THE HOUSEHOLD AID COMPANY (REISSUED)

The Ellen Richards Memorial Fund Committee through the courtesy of the Women's Education Association of Boston, is issuing, as a publication of the Fund, Mrs. Richards' report of the work of the Household Aid Company as carried out in Boston in 1902-1904, an experiment in organized domestic service by the hour. To accompany this report the Memorial Committee has secured from Lucy Maynard Salmon, Professor of History in Vassar College and author of the historical and scientific study of "Domestic Service" which has put all Home Economics workers in her lasting debt, a statement which makes plain the far-reaching results of Mrs. Richards' service in promoting the experiment in Boston.

The report of the Household Aid Company may be obtained from the JOURNAL office for 25 cents.

MRS. RICHARDS AND OUR DEBT TO HER

LUCY M. SALMON

Honor has always and everywhere been accorded the missionary who leaves home and carries religion to those he believes ignorant of it. A like honor is paid the pioneer who through privation and hardship advances, in a temporal way, the outposts of civilization. It has remained for our own day to give to the world a new kind of missionary and a new kind of pioneer who through means quite different have benefited humanity in a spiritual way and in a material way. The worker in his laboratory and in his study is a missionary and a pioneer who is discovering truth and spreading the

knowledge of it. The idealism, the faith, the zeal that have always characterized the forerunner in religion and the pioneer in the development of new countries equally distinguishes today the investigator who in the solitude of his study and of his laboratory, in the heart of the great city, looks into the secrets of nature and of life and reveals them to the world. These intellectual pioneers have opened up to us wide realms of knowledge, yet it was inevitable that they should overlook many fields lying near at hand.

Mrs. Richards was among the very first to realize that the home affords an opportunity for scientific investigation and she became our first great pioneer home missionary. Gifted with rare insight into the heart of things, trained in mind and in hand, and fired with the zeal of the scientific investigator, she discovered rich veins of interest where others had seen only prosaic humdrum duties, menial service, and uninspired, uninspiring household direction.

The value of any investigation often depends less on its intimate results than on the forces it frees and turns against ignorance. If much of Mrs. Richards' work for the house and the home was too far in advance of the time to be productive of immediate widespread results, it is equally true that no one can circumscribe its far-reaching effects. Essentially an investigator, she was a true teacher in that she rejoiced to pass on to others the results of one investigation before turning to new fields to explore. Yet however far her explorations took her, it was always to the home that she returned. Much of the ignorance that once surrounded it has been dissipated as a result of her own scientific study of it and of the investigations she set on foot.

The Household Aid Company carried on its work in Boston for two years with apparently negative results, but its great achievement has been the awakening of housekeepers in every part of the country to an appreciation of the necessity of studying domestic conditions before attempting to reform them. For this great work all who dwell in homes must be grateful, and for her inspiration and encouragement in that work they will render special honor to Mrs. Richards.

EDITORIALS

Teaching Household Arts in the Home. Probably no article in the current number of the JOURNAL deserves more careful thought from our readers than does that of Professor Cutler on Community Housekeeping. If the tendency toward the disintegration of the home in the form we now know it is as marked as Professor Cutler's argument would imply, the courses offered in Home Economics should be radically changed. But we ask our reader to consider that one-half of our population still lives in the country or in very small towns where the "single dwelling located on a plot of land which is at the disposal of the residents" is still the rule; that in these houses women pursue many of the household arts, and this home is the center of hospitality and of social life; also that, barring the possession of land, these are the conditions in a vast number of town and city houses, so that even granting the tendency that Professor Cutler outlines, the conditions that he depicts actually exist as yet in a comparatively small number of homes and we need have no fear but that there will be breathing time for adjustment to the inevitable; and that good and not evil will come out of the change.

Moreover, certain influences are at work that seem to be overlooked by our sociologists when making these predictions. This is often called the age of the child. Even the most extreme individualist owns that each generation lives for the next. When the scientist and the educator are able to say with certainty what are the best agencies and influences for the upbringing of the young, it is safe to say that that environment will be compassed in every community. It has been already decided that children shall not be reared in small city tenements and crowded streets. It will soon be demanded that the factories and other places in which the fathers of these children work shall be built in the open country where the individual home is possible. There would still remain the need of help in organizing for such groups the right educational and social life.

Another requirement of the young child which has always been taken for granted and is now being proved by careful investigation

is that he be a member of a not too large group of different ages to which he *belongs*. He needs love unmeasured, play, teaching of the basic human relations, best done perhaps through the sharing of small household tasks whose relation to the comfort and well being of those he loves is perfectly evident, not manufactured for the purpose as in kindergarten work, and through the watching of processes that demonstrate simple physical and chemical principles. These conditions are found in normal family life. It is quite possible that new and cogent reasons may develop for the performance of certain household processes in the individual home quite apart from their industrial value, and if so, these arts must hear and heed the call, "Back to the home."

Help for Teachers. Young teachers of Home Economics read the JOURNAL and report that they gain much from it. But the Association wishes to be still more helpful to them, and the new plan of having a field secretary makes it possible to do much in this direction.

There are many questions of method for the school-room, such as, how to condense processes to limited periods, how to adapt recipes to the rising market prices, etc., which are difficult for an inexperienced teacher to settle, however good her previous training. These may better be covered in direct correspondence than in the pages of the JOURNAL.

Any such questions from our readers, addressed to the secretary, Miss Anna Barrows, Teachers College, New York City, will be promptly acknowledged, and will be referred to specialists if answers are not otherwise accessible.

The Field Secretary. Routes are being planned so that the Field Secretary may visit as many states as possible during the months of February, March, April, 1915. One trip is planned through the South. Southern institutions are urged to arrange in advance for a visit from the secretary. It is hoped that trips to other parts of the country will be made.

Since the Association furnishes the time of the secretary, schools and clubs on any route will share her traveling expenses.

Requests and suggestions should be sent as soon as possible to Miss Anna Barrows, Teachers College, New York City.

HOUSEKEEPERS' DEPARTMENT

THE MARKET AND THE HOUSEWIFE¹

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How to buy more effectively is the housewife's most important business problem. Its solution turns as much upon better markets as upon a better marketer. Better markets will be secured as the people, including the housewives of the country, work for the conditions underlying better markets, and these conditions are: first, a more efficient production on farm and in shop that there may be cheaper products and products more satisfactory to the consumer; next, improved transportation from point of production to market; next, economic terminal and wholesaling facilities in cities; next, economic retail organization; and finally, marketing legislation, that is, the social support and control of the mechanism of markets by adequate laws and by supervision, so far as may be advisable. These conditions will be presented in turn, from the housewife's point of view.

An efficient market turns primarily upon efficient production, both agricultural and industrial. Make cheaply and well, and the housewife can buy cheaply and well. Accordingly, of fundamental significance is the national sweep toward vocational education—every boy and girl thus trained in production, means cheaper and better goods. One illustration—the United States Department of Agriculture in seeking to find a ration for fattening cattle which will put on edible tissue instead of suet may affect a saving for the marketer as great as any that an elaborate reform of markets might accomplish. A consumer's economy arises when the producer puts the goods in just the form desired; package goods and canned goods are illustrations, and the tinning of cooked cheaper cuts of meat and possibly of condensed skim milk for cooking are needs. The

¹ Presented at the Seventh Annual Meeting of the American Home Economics Association, Cleveland, 1914. Dr. Andrews' address is given in part.

grading of food products into standards set by authority, and easily understood, is a most important producer's contribution to the marketer. What has already been done in establishing grades of oranges, prunes, and other fruit, and packing by grades, is applicable to canned goods (where indeed it exists in a chaotic state), vegetables, and meats, and possibly textiles. A post card order for No. 1 lettuce, for example, should bring the housewife practically a standard product. Grades exist in wholesaling; they need to be made uniform throughout the country, observed by all producers and packers and carried over into retail trade. Finally, the housewife marketer needs some group method of expressing her preferences to the producer and so directing production to meet consumer's needs more precisely. Buying clubs and coöperative societies will best express group views, but other informational services have great possibilities.

Transportation affects markets by its adequacy, its efficiency, its costs. The continued development of steamship and steam lines is needed but especially the gridironing of rural districts with trolley lines and with auto-busses which are already gathering and distributing routes for food and other household necessities. The new tariff brings eggs from China and butter from New Zealand; the inter-urban trolleys furnish produce to Indianapolis and other cities; and the Reading railroad which delivers, to suburban towns, purchases made in the Reading Terminal Market, Philadelphia, suggests one solution for suburban centers. Housekeepers should study the adequacy of local food transportation service and consider possibilities with their chambers of commerce. The parcel post service should be extended to 100 lbs. and more, at least to and from rural homes where express is not available. The efficiency of food transportation and storage is improving and is due in large part to studies made by the U. S. Department of Agriculture. Proper preparation by the producer and continuous low temperatures in transportation and storage achieved by the use of chilled cars, warehouses, and even chilled trucks, extend the time and enlarge the area in which perishable foods can be shipped; hence our year-round fruits, vegetables, and other perishable products. The cost of transportation is a minor item in consumer's food cost, but the housewife must stand for the lowest possible transportation rates.

The wholesale marketing of foods, especially country produce, has been sharply criticized as regards so-called unnecessary middlemen. Three modes of improvement are possible: By the city, by the producer, and by the retailer. First, the city may provide connection between the railroad and the retailer, by establishing terminal markets where the retailer can buy direct from the car or in an adjoining storage warehouse. Thus there would be obviated the carrying of produce successively from one point to another in the city between the rehandlers who divide, subdivide and grade the produce, and finally sell to each retailer the quantity and quality he desires. Bringing rehandlers to one point would save some carriage at least. Accordingly, the wholesale terminal market is the solution proposed for New York City by the Mayor's Market Commission. In the second place, the producer may undertake wholesaling functions as in the case of the California and Florida fruit exchanges, the vegetable shipping associations, and various coöperative producers' associations which ship in car lots, and distribute directly to the retailer through local agents. Thirdly, the retailer by organizing associations of independent stores which buy as a unit or large retail units such as the "chain stores" owned by a single company, may reach back into the wholesale field and assume what have been middlemen's duties—get goods sorted into grades and divided into quantities desired by the individual retail store. All three movements are under way—but the housewife may well remember that this grading and quantitative sorting must be done somewhere and paid for when done. Losses through carting goods back and forth when the two middlemen concerned could do business at one point; action by two companies when one can undertake both functions and charge but a single profit; deterioration by rehandling; sorting and grading done in a city which might be done in the country more cheaply—these point to some possibilities of real economics in wholesaling.

Retailing of foods, in New York City at least, costs 33 per cent of the consumer's price while wholesaling costs only 10 per cent. Economies in retailing depend, in part upon the retailer, in part upon the consumer. The retailer may seek a more economic business unit than the small detached store—thus the "chain stores" managed by a central company and the "food department stores," that is, a large unit combining groceries, meats, fish, green groceries, deli-

catessen, etc., largely reduce wholesale and retail charges, nearly by a half it is reported. Delivery costs may be reduced as when the stores maintain a joint service; losses by credit may be obviated by a cash business and credit costs are reduced by the food department stores; a clerkless store has even been tried in which the customer waits on himself. Buying at retail by mail has undoubted economies, and the problem of mail-order houses merits a public investigation. Savings by retailers' economies go to the retailer rather than the purchaser, but a good illustration of benefit actually received is the 3 per cent reduction for meat purchases carried home on the prices for delivered goods allowed by a New York store, and taken advantage of by 45 per cent of its customers. If prices were set on the basis of delivery by the purchaser, and a fixed charge for delivery by the store made, still greater benefits would accrue to the purchaser.

Economies in retailing may be sought by the purchaser himself by buying in large quantities directly from the producer or elsewhere, either as an individual, or through membership in a temporary or permanent buying club, or through a coöperative store.

The individual housewife may purchase directly from the producer in the case of farm produce, and the Wells Fargo and Adams Express Companies, and the Parcel Post now experimenting in a dozen cities, are developing this direct selling by printing lists of shippers; the farmer's market furnishes the same advantage. The individual can only rarely buy of a wholesale grocery house; she can however buy quantity lots from a retail grocer at perhaps 10 per cent reduction. The individual may however join with one or more neighbors in a temporary or permanent marketing club, and increase her buying power. Such temporary buying arrangements are frequently entered into—their economies turn on buying in quantity either from retailers or producers. The temporary club is not likely to be able to buy from wholesalers, but if the club is a large permanent formal organization it probably can do so. Such organized buying clubs seem a promising agency, since they risk no capital in a stock of goods as does the coöperative store, but are still free to grasp opportunities for favorable buying as they arise.

A further word should be said as to the farmers' market, the buying club and the coöperative store. The farmer's market in which individual farmers bring in produce is not an entirely economical method; it takes the farmer away from his work; the selling force is

larger than the sales warrant; it has no delivery service. An improved market might be suggested, maintained by an association of farmers in which graded produce would be sold by their representative with telephone for ordering and a joint delivery service with a flat charge per delivery. The marketing club, whether of housewives as at Greensburg, Pa., or of office and shop employees, as of the Civil Service coöperators in Washington and the clubs reported by the express companies, centralizes orders from a dozen, fifty or one hundred families, and places them through a committee or compensated agent who arranges for purchases and delivery. Payment in advance at a level sufficient to pay all costs is the simplest basis of operation. Definite business arrangements are essential—everyone has had experience with the joint purchasing with a neighbor in which trouble or misunderstandings arise as to quantities, qualities, advancing cash for payments, delivery of goods, etc. The permanent buying club effectively organized may prove a stepping stone to the coöperative store.

A coöperative store is one owned by its own customers who receive its profits in the form of a percentage dividend or rebate on purchases. The principles of coöperation as worked out at Rochdale, England, require: open membership, any one may join by buying stock; small share-value of stock, usually \$5; a limit placed on the amount of stock an individual can own; policies determined by one vote for each stock-holder, not one vote for each share; goods sold at regular market prices; cash sales, only; 5 per cent interest allowed on the stock, and net profits distributed to purchasers (sometimes only to members) in proportion to the amount purchased. Retail coöperation which has been so successful in England and Scotland will ultimately succeed here as fast as regard for small savings and thrift become necessary among our people, for thrift, with the coöperative spirit, is essential for successful coöperation.

Ford reports 60 coöperative stores in New England. As the agricultural colleges are training leaders for rural coöperative enterprises so our schools of Home Economics may train leaders of coöperative retail and purchasing enterprises.

FOR CLUB STUDY

At the request of Helen Louise Johnson, Chairman of the Home Economics Committee, General Federation of Women's Clubs, the JOURNAL has selected the preceding article as adapted to club study. The following suggestions and references will prove helpful:

Suggestions. Arrange for a personal conference with the express agent in your town, whether for buying or selling food; send names to express company and post office for receipt of weekly lists of producers; appoint members to read and report from reference books; organize a buying club of not less than ten members pledged to hold together for a definite time, to follow the plan of the Greensburg Market Club as described in the June, 1914, JOURNAL.

References. Coöperative Buying as reported in any number of the JOURNAL for 1914; The History of Coöperation, by Holyoke; The Cost of Living, *Annals of the American Academy of Political and Social Science*, Philadelphia; Coöperation in New England, by James Ford, The Survey Associates, New York; Report of the Cost of Living Commission, Boston, 1910; Report of the Mayor's Market Commission, New York, 1913; Shipping Eggs by Parcel Post, U. S. Department of Agriculture, *Farmer's Bulletin* 594; Markets for the People, by J. W. Sullivan, The Macmillan Company, 1913.

MORE INFORMATION ABOUT THE SMITH-LEVER BILL

In the *Weekly News Letter to Crop Correspondents* issued by the United States Department of Agriculture we learn that there is a good deal of misunderstanding in different parts of the country as to the method by which the money appropriated by Congress under this act is to be expended. Letters received by the department indicate that many think it can be obtained by individuals for the general improvement of home conditions.

The necessary steps which precede the use of this money for any community are the following:

1. The \$10,000 which for the first year is granted to every state must be duplicated by the state either by direct appropriation from state funds or by contributions.

2. The sum is then placed at the disposal of the State Agricultural College which expends it in paying the salaries and expenses of men and women who as county agents and experts will move about among the farming people to demonstrate good methods of agriculture and Home Economics, to coöperate with them in studying their farm and

home problems, and to assist them in the adoption of better methods on their farms or in their homes. In many of the southern states these agents are already at work in connection with the demonstration extension courses. The women agents demonstrate the preparation and use of products from canning clubs, pig clubs, poultry clubs, and the winter garden; they also show how to make or secure labor saving devices and conveniences.

The literature used will be as far as possible the circulars, letters and bulletins issued by the State Agricultural Colleges and the U. S. Department of Agriculture but 5 per cent of the fund may be expended for printing and distribution of publications. Every county in the United States may soon have its women agents, those that show enthusiasm and interest being perhaps the first to receive such help. Women as individuals or better still as clubs should appeal to their state agricultural college and ask to be put in touch with their county agent and with that agent they may plan for demonstrations and other help.

A TIME-STUDY IN DISHWASHING

ELLA KAISER CARRUTH

"Dish-washing is a job I won't do more than once a day."

"I wash dishes the moment a meal is over."

These two statements, appeared in the same number of a prominent household magazine not long ago. They excited my interest yes, even my curiosity.

It occurred to me that for the housekeeper who washes her own dishes a very important reason for adopting one way of doing her work rather than another is that the chosen way takes less time. Also it occurred to me that to find out which of these two methods took the less time was rather easy. I had a dish-pan, soiled dishes, and a clock—all the equipment necessary for an experiment and I experimented.

One week I washed dishes twenty-one times. The next week I washed dishes seven times. During these two weeks our meals were so planned that about the same number of dishes would be used on each day.

Lest the time indicated in the table below seem unduly short, let me say that the family consists of two; the meals are always simple—

two or three courses. I cut down the length of time consumed in dish-washing by refraining from wiping anything but the silver, glasses, and cooking utensils. The china was always rinsed with boiling water and allowed to drain dry.

The time counted was from the moment I put the dish-pan into the sink until the last bit of cleaning of sink, table, etc., was finished.

Comparison of time consumed in the two methods

	<i>Three times a day minutes</i>	<i>Once a day minutes</i>
Sunday.....	49	41
Monday.....	55	53
Tuesday.....	53	43
Wednesday.....	49	29
Thursday.....	53	43
Friday.....	47	40
Saturday.....	58	41
	<hr/>	<hr/>
	364	290
Daily Average.....	52	41 $\frac{3}{4}$
Total gain.....		74
Average daily gain.....		10

FOOD FOR SCHOOL BOYS AND GIRLS¹

Observations on thousands of school children show the retarding effect of poor feeding on body weight. On the other hand, experiments in feeding groups of these undernourished children have resulted in a pronounced gain in weight, one group of 40 children having averaged a pound and a half of increase per child in a four-week period (in which about three-fourths of the whole day's food supply was carefully supervised), while before the special feeding they had been gaining only about a quarter of a pound each per month. Besides failure to make proper gains in weight, other common signs of undernourishment are weak bones, flabby muscles, and lack of plenty of good red blood.

Both kind and amount of food are important. The body is from birth a ceaselessly working machine, maintaining itself through such internal work as respiration and circulation and digestion, and more

¹ Extracts from Food for School Boys and Girls. By Mary S. Rose. New York: Teachers College, Technical Education Bul., 23, pp. 15. Other extracts from this bulletin will be printed in a future number.

or less continuously engaged in muscular activity. Till the need for energy for these different kinds of activity is met, there cannot be available much material to build up into new body substance. In addition to this supply of food for fuel (which may serve in part also as food for growth), certain other substances are required specifically for body-building. The fuel requirements of the body and the fuel values of food to satisfy these requirements are measured in terms of a standard unit—the calorie. The requirements of children vary with their age and body weight, being highest per pound in the youngest children, as is shown in the following table:

FOOD REQUIREMENT ACCORDING TO AGE

<i>Age, years</i>	<i>Calories per pound</i>	<i>Calories per day</i>
1-2	45-40	900-1200
2-5	40-35	1200-1500
6-9	35-30	1400-2000
10-12	30-25	1800-2200
14-17	25-20	2300-3000
18-25	not less than 18	2300-3400

Having determined the energy requirements of any particular person whom we have to feed, we must turn to foods and see how this supply of energy is to be obtained. Since several hundred calories are required each day, it is most convenient to think of our foods in 100-calorie portions. Some examples of the amount of food required for such portions are given below. More extensive tables are available in various publications.²

The following approximate amounts of food yield 100 calories:

Cooked or flaked breakfast foods, $\frac{3}{4}$ –1 cup; milk, $\frac{3}{5}$ cup, whole, $1\frac{1}{8}$ cup, skimmed; cream, $\frac{1}{4}$ cup, thin; $1\frac{1}{2}$ tablespoons, very thick; butter, olive oil, or other fat, 1 tablespoon; bread, 1 slice 3 inches by 3 inches by 1 inch; uneda biscuit, 4 crackers; fresh fruit, 1 large orange or apple; 1 medium banana or bunch of grapes; 2 large peaches or pears; dried fruit, 4 or 5 prunes or dates, 2 dozen raisins, 1 large fig; eggs, 1 exceptionally large; $1\frac{1}{4}$ medium; meat (beef, lamb, mutton, veal, chicken), about 2 ounces of cooked lean meat; bacon (cooked crisp), about 1 ounce (4 small thin

² Laboratory Handbook for Dietetics. By Mary S. Rose. New York: The Macmillan Company.

Human Nutrition. By Flora Rose. Pt. I, Cornell Reading Course for Farmers' Wives, N. Y. State College of Agriculture.

Food Values, Practical Methods in Diet Calculations. American School of Home Economics, 606 W. 69th Street, Chicago, Illinois.

slices); potatoes, 1 medium; sugar, 1 tablespoon granulated; cocoa (made with milk), $\frac{1}{2}$ cup; cream of bean soup, $\frac{1}{2}$ cup; macaroni and cheese, $\frac{1}{2}$ cup; rice pudding, $\frac{1}{2}$ cup; ice cream (made with thin cream), $\frac{1}{4}$ cup; milk sherbet, $\frac{1}{3}$ cup; sponge cake, 1 large individual cake; nuts (shelled almonds, peanuts, pecans), about $\frac{1}{2}$ ounce; sweet chocolate, about $\frac{3}{4}$ ounce.

Building materials of many kinds are needed, the most important elements being nitrogen, phosphorous, iron and calcium. Nitrogen is obtained exclusively from proteins, a kind of foodstuff found in large amounts in milk, eggs, meat, fish, dried peas, beans, and lentils. Milk is rich in all kinds of building material except iron, and contains these substances for growth in the most readily used form. It should constitute the chief part of the diet throughout childhood; and in the later years of growth should still be freely supplied. While whole milk is richer in fuel than skim milk, the latter contains nearly all of the nitrogen, phosphorous and calcium of the whole milk, and is still very valuable food. Egg yolks are rich in the iron which milk lacks, and also in nitrogen and phosphorous. Green vegetables, dried peas and beans, cereals (especially from the whole grain), are very valuable for their building materials and some of these foods should be included in every day's menu.

HUMAN HEALTH AND THE FOOT-AND-MOUTH DISEASE¹

According to the specialists of the Department of Agriculture people even in states quarantined for the foot-and-mouth disease need have no fear of eating meat, provided they cook it thoroughly. The foot-and-mouth disease is not easily communicated to human beings through food, although milk from a diseased cow might transmit the disease to a human being. In the case of milk, however, pasteurization will render it entirely safe. Milk from infected farms is not permitted to be shipped at all. The only danger is, therefore, that before the disease has manifested itself some infected milk might reach the market. For this reason, experts in the U. S. Department of Agriculture recommend pasteurization. As a matter of fact, however, pasteurization is recommended by the Department for all milk that is not very high grade.

It has been demonstrated by experiments which have been made in Denmark and Germany that pasteurization will serve as a safeguard against contagion from the foot-and-mouth disease just as

¹ Office of Information, U. S. Dept. of Agriculture.

readily as it does against typhoid fever, but in any event it must be thoroughly done—the milk must be heated to 145°F. and held at this temperature for 30 minutes.

Where pasteurization is not possible, and where there is any reason to suspect that the disease may exist, the precaution of boiling milk might be advisable. Simple directions for pasteurizing milk at home, however, are contained in Circular 127 which will be sent free on application to the U. S. Department of Agriculture.

In the case of meat, as in the case of milk, it must be remembered that all herds which actually show the disease are quarantined, and neither milk nor meat from the sick animals can be sold. Sixty per cent of the meat used in this country is produced in the nearly 900 Federally inspected slaughtering and packing establishments located in 240 cities.

The Federal Government, however, has no jurisdiction over local slaughter houses which do not ship meat outside of the state in which it is slaughtered. If, however, meat from such an animal did escape from one of these local slaughter houses, which are purely under state or municipal control, all danger of its communicating the disease to human beings would be removed when it is thoroughly cooked and sterilized.

THE 1000 CALORIE RESTAURANT

The following is the final report as to what seemed at one time a hopeless quest. Early in the autumn a New York daily announced that a restaurant applying the recent work of Dr. Graham Lusk had been started on the lower East Side of New York, a rebuke, indeed, to more wealthy and intelligent regions where any scientific measure of food values in a luncheon or dinner is far from being applied. But it seems we have still to wait. A correspondent writes:

The 1000 calorie restaurant proved to be a 1000 calorie dream. It is true that Dr. Lusk wanted some one to start a restaurant on the Bowery where 1000 calories of food could be purchased for 10 cents. His menu was $7\frac{2}{3}$ ounces beans, 1 ounce pork, $2\frac{1}{3}$ ounces bread, $\frac{1}{2}$ ounce butter, 5 ounces coffee with 5 ounces of milk. A man who runs a "beanery" in a basement at the far end of Broadway, took up the proposition and estimated a cost of $4\frac{1}{4}$ cents for materials and coal, excluding rent and labor, but found the price of foodstuffs going up so rapidly that he very shortly abandoned the project.

HIGH COST OF LIVING

How much are you paying to have ammonia gas bottled in water? If you buy concentrated ammonia at the drug store and dilute with 6 times its volume of water you can save from \$1.20 to \$4 on each pound of the gas contained in the commercial solution. See the article by Dr. Snell, entitled "Household Ammonia an Economic Absurdity," page 22. The JOURNAL hopes to publish many more articles on comparative costs, and would like to receive, from housewives and others, the result of any experiment or experience in this line.

THE DOCTOR AND THE FARMER'S WIFE

Dr. Clarence J. Blake of Boston tells the following story:

A farmer's wife was found too run down from overwork to respond to treatment. She told him that she and her young daughter did all the farm and house work for a family consisting of her husband, two hearty sons and two hired men, "And sometimes when I go to bed at night and think over what's on hand that must be used to-morrow and what will keep over and what must be cooked and bought and all the rest I just wish that my folks could have their vituals made up into an i-nte-ment an' rubbed into 'em."

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BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS at the price listed

Household Physics. By ALFRED M. BUTLER. Boston: Whitcomb and Barrows, 1914, pp. viii + 382, figs. 349. \$1.30. By mail of the Journal, \$1.42.

Physics of the Household. By CARLTON JOHN LYNDE. New York: The Macmillan Company, 1914, pp. xi + 313, figs. 217. \$1.25. By mail of the Journal, \$1.40.

It is significant of the progress of the cause to which this JOURNAL is devoted that two text-books on the fundamental science of physics, prepared especially for students of Home Economics, should make their appearance at this time, and so nearly at the same instant that the projected title of the one had to be altered to avoid confusion with the other. And it is gratifying to find both these pioneer text works of such excellent character. The aim of both the authors has been to present the science of physics "more for the sake of the pupil than for the subject alone," and how fascinatingly interesting the subject can be made, when treated from this standpoint, will be realized by anyone who examines either of the books, and most fully appreciated by those who read both.

Naturally, the two books have much in common in their selection of topics. To mention a few of many instances, both treat of the gas meter, of the vacuum cleaner, of the fireless cooker, of the vacuum-jacketed bottle, of artificial cooling, and of electrical heating appliances. Neither author confines himself strictly to the household. Butler, for instance, discusses eclipses and rainbows, while Lynde devotes a short chapter to wireless telegraphy and radio activity. However, the inherent interest of such phenomena doubtless justifies digressions. The proportion of space devoted to heat and electricity is greater in Lynde's book, while light and sound are more fully treated in Butler's. The order of treatment is also fundamentally different. Butler begins with heat on the ground that it is "closer to the students' life than is mechanics" and treats light, sound, and electricity before mechanics. The latter subject, however, is so treated that "those who desire can just as well start with this chapter and take up heat second." Lynde begins with mechanics, which he relates to the student's experience by first discussing simple mechanics, such as the lever;

wheel and axle, pulley, and screw, all of which find numerous applications in household utensils. The less familiar conceptions of energy, inertia, momentum, etc., are introduced in a supplementary chapter at the end of the volume. Heat comes second in this book and electricity is treated before light and sound.

Both books are clearly printed, strongly bound, and remarkably free of typographical errors. Both are well illustrated, the drawings in Lynde's being worthy of special commendation. Teachers of physics will naturally wish to examine both texts and having selected one as a text-book we feel sure they will retain the other for the sake of the numerous supplementary exercises and applications of physical principles it will afford.

The Disposal of Household Wastes. By WILLIAM P. GERHARD. New York: D. Van Nostrand Company, 2 ed., 1904, pp. 195. Price \$0.50. By mail of the Journal, \$0.55.

This little book, although written twenty-five years ago, is still valuable as a book of reference in this subject. It deals with waste disposal (i.e. disposal of garbage, ashes, slops, sewage) in case of the small cottage or farmhouse, the larger cottage or suburban or country residence, the village dwelling, the town house, the institution or group of dwellings. The appendix contains specifications for laying house drains and pipe sewers, for building tight cesspools, for sub-surface irrigation system for country house, and suggestions for sanitary code for municipality.

The teacher of house sanitation who wants a short and purely practical treatise on this subject, very clearly and lucidly written, may welcome the book to her library. But it must of course be remembered that the more recent books on the subject will contain a greater proportion of up-to-date material.

Sanitation, Water Supply, and Sewage Disposal for Country Houses. By WILLIAM P. GERHARD. New York: D. Van Nostrand Company, 1909, pp. 328. Price \$2.00. By mail of the Journal, \$2.15.

Much of the material of the earlier book, *Disposal of Household Wastes*, appears in this volume. Like the former, it appears to have been addressed to engineers primarily (at least this is true of "Water Supply" and "Sewage Disposal" in the second half of the book); but it offers no especial difficulties to the lay reader who has had a little science training, though it contains a good deal of technical detail.

The first 85 pages, "Sanitation," treat of the disadvantages of town houses; the location, site, surroundings, soil, drainage of the country house; cellars, arrangement and construction of rooms, relation of insects to health

and their extermination, window and door screens; lighting, ventilation, heating, plumbing, waste disposal, water supply, and care of the country house.

Report upon a Study of the Diet of the Labouring Classes in the City of Glasgow carried Out During 1911-12 Under the Auspices of the Corporation of the City. By DOROTHY E. LINDSAY. Introduction by D. Noël Paton. (Physiological Department, University of Glasgow, Glasgow, 1913, pp. 100.)

The sixty families investigated were in the poorest districts of Glasgow, the weekly income varying from \$3.25 to \$15, being in some cases regular and in others irregular, and they were grouped according to the amount of income. The kind and amount of food, the proportion of income expended for different foods, and other data are recorded and discussed. The principal foodstuffs used were found to be bread, potatoes, beef, milk, sugar, and vegetables, two-thirds of the protein supplied being of vegetable origin. Very little oatmeal, peas, beans or cheese was used.

The conclusion was reached that bad marketing is one of the main factors contributing to the existing dietary conditions, as are also bad selection and bad cooking. Proper school training in cooking and marketing is recommended as the best remedy, and a freer use of cheese and vegetables rich in protein, like beans, peas, and oatmeal is advocated. That there is difficulty in preparing such foods is admitted; however, "if the diet of the labouring classes is to be improved, without increasing the cost, time and labour must be expended on properly cooking these more nutritive vegetable foods."

The report also includes the results of work carried out in coöperation with Chalmers and Roberts, on the physique of children in relation to diet. It was found, when the weight of a child was much below the average for its age, that almost without exception the diet was inadequate. An attempt was also made to ascertain what part inadequate diet played as a cause of rickets, but the data secured were not sufficient for definite conclusions. It was noted, however, that rickets was found in families in which there was overcrowding.

Vacuum Cleaning Systems. A Treatise on the Principles and Practice of Mechanical Cleaning. By M. S. COOLEY. New York: Heating and Ventilating Magazine Company, 1913, pp. xiv + 232, figs. 104. \$3. By mail of the Journal, \$3.12.

In this book are compiled data regarding permanently installed systems of vacuum cleaning which the author has obtained from several years' experience in the preparation of specifications for and the testing of such plants in governmental buildings.

A history of the development of mechanical cleaning is given with a discussion of the merits and faults of the earliest systems. A chapter is devoted to the requirements of an ideal vacuum cleaning system, which are chiefly as follows: With such a system it should be possible by thorough daily cleaning to eliminate weekly or semi-annual cleanings when the housekeeper so desires. The dust, dirt, and germ-laden air should be removed entirely from the house. The use of the broom, carpet sweeper, dustpan, and duster should be replaced in the daily cleaning by the ideal system. It should be capable of picking from the floor a great variety of articles such as would be apt to be found in houses, office buildings, etc. It should have the fewest possible number of appliances and the removable parts should be light and at the same time durable. It should be possible to clean the room without removal of heavy pieces of furniture. Finally, the system should be of such proportion and power as to clean both rapidly and efficiently.

The different types of renovators are discussed in detail and data given regarding the efficiency of the more common types. The other parts of the system, including stems and handles, hose, pipe and fittings, separators, and vacuum producers are treated in a similar manner. A chapter, devoted to the selection of the cleaning plant, gives detailed information regarding the selection of the most efficient types of the different parts of the system in order to produce in combination the most efficient system under the conditions to be met in a given installation. Sample specifications are given for systems to be used in a residence or small office building, and in the case of a plant for use in large office buildings both where pipe lines of moderate and unusual length are necessary. Portable vacuum cleaners are treated very briefly. These are said to be much less efficient and also less sanitary than the permanently installed type.

BOOKS RECEIVED

- Foods and Sanitation.* By Edith H. Forster and Mildred Weigley. New York: Row, Peterson and Company, 1914, pp. 396. \$1.35. By mail of the Journal, \$1.40.
- Preservatives and Other Chemicals in Foods.* By Otto Folin. Cambridge: Harvard University Press, 1914, pp. 60. \$0.50. By mail of the Journal, \$0.54.
- Canning, Preserving and Pickling.* By Marion H. Neil. Philadelphia: David McKay, 1914, pp. 284. \$1. By mail of the Journal, \$1.10.
- The Care and Feeding of Children.* By John L. Morse, M.D. Cambridge: Harvard University Press, 1914, pp. 53. \$0.50. By mail of the Journal, \$0.55.
- The Mental Health of the School Child.* By Dr. J. E. Wallace Wallin. New Haven: Yale University Press, 1914, pp. 463. \$2. By mail of the Journal, \$2.15.
- For Girls and the Mothers of Girls.* By Mary C. Hood, M.D. Indianapolis: Bobbs-Merrill Company, 1914, pp. 157. \$1. By mail of the Journal, \$1.10.

NEWS FROM THE FIELD

Connecticut Home Economics Association. The annual fall meeting was held in connection with the State Teachers Association, October 23, in Hartford. About seventy-five were present at the afternoon session to hear Miss Anna M. Cooley of Teachers College, N. Y., who spoke upon the subject, "How shall we keep our household arts courses up-to-date."

Home Economics Association of Greater New York. Because of the failure of the market commission to supply a speaker, the program for the November meeting could not be carried out.

The association met at Pratt Institute on December 3 to commemorate Mrs. Richards' birthday. Miss Barrows addressed the meeting, recalling some of her personal experiences with Mrs. Richards and with other early Home Economic workers.

Michigan Home Economics Association. The fifth annual meeting of the Michigan State Home Economics Association was held at Kalamazoo, Friday, October 30. The papers and address centered about the modern home. The first paper was by Miss Edith Blackman of the Michigan State Normal College at Ypsilanti. Her subject was "Household Management," and treated of the modern home as a business enterprise. She said that the modern housewife must be fitted to organize her home as skilfully as business is organized.

Dean Georgia White of the Michigan Agricultural College at East Lansing, was the second speaker and her subject was "The Modern Home" in one or two phases often overlooked. She said in part, "Home must mean more to us than it did in former days, for the demands of life necessitate a broader knowledge of industrial life and a more careful organization of the home. The real function of a home of today is to provide real rest for those living in this busy world of competition; whether it be the business man, the child from school, or the woman in civic or social life, they all need rest. Proper training fits one to manage a household so that there is leisure for all; and it subordinates the routine to higher life in the home."

The address of the afternoon was by Miss Martha Van Rensselaer of Cornell University. She outlined the purpose of Home Economics as follows:

To make men and women—to prepare them for good citizenship; to prepare men and women for good home makers; to aid men and women in finding a vocation.

We need to establish a standard in Home Economics above mere *cooking* and *sewing*. We must know not only the “hows” of home subjects but the “whys” also, and we must teach by our examples.

American Vegetable Growers. The Seventh Annual Convention of the Vegetable Growers' Association of America met in Horticultural Hall, Philadelphia, October 6-9, 1914.

Prof. Clyde L. King, of the University of Pennsylvania, led the discussion in the evening on “Standardization.” William H. Ball, chief of the bureau of city property, said that the greatest problem in the cost of living is the breaking down of the barriers between the producers and consumers. All food is delivered by the most circuitous route to the city consumer. As a result, the farmer does not get enough for his produce and the consumer pays too much. Middlemen will not and should not be eliminated, but it is necessary that farmers be induced to ship at least a portion of their goods direct to consumers.

Professor King in summing up the results of his investigation of marketing, pointed out that there should be coöperative societies for reporting to members, and state or national agencies for issuing market reports.

Also that the “middleman” consists of at least five different classes of dealers and the problem is not so much the elimination of all of these, as the elimination of the least useful, thus simplifying the process of distribution. Standardization of grading and packing, thus making unnecessary the repacking, is the first essential in eliminating the useless middlemen.

One entire session under the leadership of Prof. Paul Work, of Cornell University, was given to the discussion of the principles of coöperation, their applicability to the trucking business and best methods of organization. Some of the essentials pointed out were as follows: First and most important, the coöperative spirit based upon mutual acquaintance, mutual needs and mutual confidence. Prof. Work declared that a grange community is the easiest in which to start a coöperative movement, because it has had preliminary training in the essential requirements. Starting with small numbers outlining a plan on a sound legal basis and taking in new members on the basis of plans developed is the surest method for success; it lessens chance for internal dissension and develops the proper spirit of coöperation. Do not try to cover too large an area at the start. Select leaders of recognized judgment and standing in the community. Look for opposition and pitfalls, but support your officers and the general movement with absolute loyalty, and opposition will disappear.

Infant Mortality Conference. The fifth annual meeting of the American Association for Study and Prevention of Infant Mortality was held in Boston, November 12-14, 1914. The program included sessions arranged by the committees on nursing and social work, pediatrics, vital and social statistics, obstetrics, and public school education. Special clinics were held on the opening day of the meeting and a valuable baby-saving exhibit was shown at the public library.

The session of most immediate interest to workers in Home Economics was that of the committee on public school education for prevention of infant mortality under the chairmanship of Dr. Helen C. Putnam. Dr. David Snedden, Commissioner of Education for Massachusetts, spoke on "Some Possibilities of Public Schools in Reducing Infant Mortality." After the discussion of Dr. Snedden's paper, the following resolutions were considered:

Inasmuch as, ignorance of sanitation, personal hygiene and care of infants before and after birth is the commonest cause of infant mortality; and racial well-being requires conformity to laws of physical, mental and social health that can be had universally only through specific education;

Resolved:

1. That for young adults and older: Instruction in Home Economics in all high schools, colleges, universities, and by extension or continuation work from these, should include in courses for homemakers the care of infants and children; such instruction to be under the control of educational authorities.

2. That for individuals in homes and for mothers' consultations: The boards of health in coöperation with other persons should provide specialized instruction in preserving the health of infants and children under school age.

Be it further Resolved:

1. That in elementary schools the health of children should be safeguarded by expert medical supervision of each child, teacher, and janitor, and of buildings and premises.

2. That pupils should be trained by the schools in the practice of correct personal habits and in personal cleanliness, and that the heating, ventilating, and cleaning of school rooms should be used as a means of teaching pupils to maintain correct standards in these particulars.

3. That the laws of health should be taught by suitable study of the physiology of plants and animals, gardening being recommended as a valuable aid.

4. That children should be taught to see the effect of personal conduct on family and community welfare.

5. That Parent-Teachers Associations and school nurses should be utilized as aids in carrying the above recommendations into effect.

General information in regard to the work of the Association, proceedings of the annual meetings, and reprints of the session on public school education may be obtained from the executive secretary, 1911 Cathedral Street, Baltimore, Maryland.

Home Schools for Rural Women. The U. S. Department of Agriculture announced August 1, 1914, a plan for home classes in practical agriculture and in domestic science for farm women whereby through the co-operation of agricultural colleges in central states home groups for the study of domestic science are formed in rural communities; the class is started under the direction of a visiting state organizer, and an agent of the Department of Agriculture, who arranges the appointment of a member of the group as leader. Text books, lecture notes, lantern slides, laboratory and cooking equipment are loaned the group. The federal government is to furnish lecture notes and lantern slides and the state colleges, apparatus up to \$100 in value and a reference library. After use by one group the equipment will be passed on to another. Courses are already provided in several agricultural subjects and in domestic science in the cooking and use of vegetables and cereal foods. The classes are to be held from 2 to 3 days a week, meeting at some convenient farm house for an all-day session, the morning devoted to book work and the afternoon to laboratory practice. The leader reads the lecture notes and presides at the discussion.

The plan of a coöperative study club with adequate equipment will, it is believed, furnish a more effective educational agency for better rural homes and agriculture than ordinary correspondence courses, which lack the stimulus of group work. These "home classes" were tried last year successfully in Pennsylvania, and are being extended this year into Massachusetts, Michigan, Vermont and Florida, while the Maine, New York, New Jersey and Delaware State colleges have also already signified their willingness to try them.

The School of Mothercraft Auxiliary. The Auxiliary of the School of Mothercraft held its first public meeting Friday evening, November 20, in the Y. W. C. A. auditorium, New York City. The addresses of the evening were: "Mothercraft in Education," by Dr. Arthur D. Dean, Chief of Vocation Division, New York State Department of Education; "The School of Mothercraft—its First Three Years," by Mary L. Read, Director.

THE Journal of Home Economics

For those interested in Homemaking
Institution Management, and Educational Work in Home Economics

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Rural School Home Economics in Massachusetts. (See page 70.)

THE Journal of Home Economics

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MUNICIPAL HOUSEKEEPING¹

MILDRED CHADSEY

Commissioner of Housing and Sanitation, Cleveland, Ohio

Housekeeping is the art of making the home clean, healthy, comfortable and attractive. Municipal housekeeping is the science of making the city clean, healthy, comfortable and attractive. Many tasks of housekeeping that were formerly performed by the individual householder are now performed by city officials. So gradually has the city taken over tasks that were once performed by the individual householders, and so many other tasks have been put upon it as it has grown into the complex and intricate thing that it is, and living in it has become such a co-related and interdependent process, that it is now confronted in a very real sense by the same problem on a highly magnified scale that confronts the individual housekeeper in making the home a clean, healthy, comfortable and attractive place in which to live.

Under modern conditions the homemaker does right to buy the household necessities, the furniture, the food, the clothes from the factory because they are made more cheaply and better there than she can have them made at home. She would be a social and economic failure if she did not adjust herself to the new industrial order of the factory system. She has not less human kindness and sympathy because she allows her sick to be cared for in the hospital, nor has she less maternal love because she sends her children out of the home to be educated. She merely recognizes that she is living in an age of

¹ Presented at the Seventh Annual Meeting of the American Home Economics Association, Cleveland, 1914.

specialization, and because she wants the best care and the best training for those she loves, she entrusts them to the care of specialists. It is not that she has failed to make home attractive that the older children seek their pleasure outside the home. It is because of their growing sociability, the result of the community life which leads them into broader fields of human interest and human endeavor than those set by the confines of the home. Such a home implies not independence, but interdependence. It establishes new bonds of human relationship, coördinated endeavor and community interests. Therefore many of the tasks that the individual housekeeper performed for her household have been projected into the community, both for the advantage of mutual service and of collective bargaining.

There is another reason than that of mutual advantage that makes us turn over to the municipality many of the tasks that the individual householders performed. It is because we have come into a fuller understanding that we are our brother's keeper. A broader humanitarianism than we knew of old makes us want to share more freely with the less fortunate city dwellers. It is not enough that we can buy for our families cleanliness and health and a degree of comfort. We want our brothers in the alley and under the hill to have the same advantage, and so we turn over to the city certain tasks to perform with the guarantee that it performs them alike for the rich and the poor. It is the twentieth century answer of the age old question "How can I share my brother's burden?"

The first and most important function of any housekeeper is to keep the home clean. The disposal of waste, such as garbage, rubbish, sewage, the cleaning of its street, the prevention of smoke and other noxious substances in the air, are all important measures in keeping the city clean. Yearly new methods of sewage disposal and sewage treatment are being devised by one group of experts while the dangers which result from failure to properly dispose of waste matter are being studied by another group. New problems in keeping the city clean are constantly presenting themselves for solution. Not only does the city in its effort to keep itself clean, establish departments that perform these duties, but it passes laws requiring individual property owners to maintain their premises in a cleanly condition and it restrains individuals from uncleanly acts, such as dumping refuse on streets or on other people's property, committing nuisances or expectorating on streets, and it employs inspectors whose duties it is to

enforce these laws. Some one has said that the same God that wrote the decalogues wrote the sanitary code. Surely an efficient enforcement of it is a God-like task, and one that is just about as difficult to perform as other God-like tasks are when performed by mere man.

In making itself a healthy place in which to live, the city has a graver task to perform, but one that is every day becoming easier of accomplishment because the science of public health is so rapidly growing. Contrast any health department of ten years ago with one of today. Then such departments were political pork barrels where any one who was owed a job was put to work granting burial permits or posting contagious disease cards on houses. Today these same departments have a staff of experts whose duty it is not only to control disease but to make an effort to prevent it; not only to decrease the death rate, but to make human life more tolerable. This marvelous advance in the efficiency of health departments has been the result of bacteriological discoveries that have made the control of disease possible and the elimination of many dread diseases, such as tuberculosis, hoped for. When we consider that as late as the seventeenth century, plague, pestilence and epidemics that desolated the population of great cities, were looked upon as mysterious agents of the evil spirit or of divine wrath, and when we realize that it was in the last part of the nineteenth century that the germ theory was discovered, and that we now hear even the proletariat talk freely about germs and microbe organisms, we can realize how rapidly this science has developed. Public health today is not only a science, it is a fad. Religions are based upon it and magazines enter the ranks of best sellers through articles about it. This popularization of public health is the result of the concrete example that scientists have been able to give the public. The transforming of the Panama Canal Zone from a fever-ridden area to a health resort by killing the malaria mosquitoes happened at a time when the interest of the public was centered on the zone and when such an act made possible the completion of the canal. Another example was furnished by the checking of the bubonic plague on the Pacific Coast by the extermination of the rats that carried it. It is now so easy to arouse a community, that was once entirely apathetic about filth and disease, into a concerted warfare against such common foes as mosquitoes, flies, and rats, that campaigns against them have become a commonplace, and newspapers no longer find news items in them. Such nuisances as foul privy vaults,

filthy manure boxes, muddy yards that were condoned and tolerated, are now recognized as the breeding places of disease, and those who are responsible for them are looked upon as foes to the community welfare.

When the public once grasped the fact that disease germs are transmitted through media such as air, water, milk and food, it demanded that these be safeguarded against infection. As a result, water purification, and the inspection of milk and meat and other food products are now considered essential parts of the city's housekeeping activities. Every city has inspectors covering the territory for miles around it to inspect the cattle who supply milk for the city in order to guard against the transmission of tuberculosis or typhoid fever in this way, and for the same reason every animal that is killed for human consumption is inspected by officials. Inspectors are at the market houses, at the bakeshops and at the canning factories, not only to see that food is prepared and handled under sanitary conditions, but that the ingredients which go into it are pure and wholesome. Every year sees new and more advanced requirements for the manufacturing of food. A few years ago, such sanitary laws would have seemed useless, but when we consider that today so much of the food comes into the home ready made, we realize the necessity of these laws.

Another housekeeping task that is placed in the health department is the auditing of vital accounts. It is no less important than the auditing of monetary accounts, for it shows us not only what our income in the birth rate is and what our outlay in the death rate is, but it shows us how we are using the income and it points out our useless expenditures. This is the new science of demography, the study of vital and social statistics. It does not confine itself to tabulating births and deaths. It takes account of what lies between. It raises the question of what does it profit us to add two years to the average length of life if life itself is not made more valuable. Death rate renders judgment as relentlessly as fate against congestion of population and insanitary dwellings, whether in the tenements of our city or in the alleys of our neglected neighborhoods. With never an error of judgment it points an accusing finger at a polluted water supply, an infected food supply or an infected house or individual.

It is difficult to distinguish what the city is doing for the sake of health from what it is doing for the sake of comfort, just as it is difficult to distinguish what it is doing for the sake of cleanliness and what

for the sake of health. To live is not all of life and to be healthy is not the underlying motive of many of our activities that make for health. Our various senses deserve consideration and so offenses to sight and smell are eliminated for no other reason than that they are offensive. Water supplies are protected and purified not only because polluted water causes disease, but because a glass of pure water is in itself a pleasure. Food supplies are protected, not only because contaminated food means that it is infected with germs, but because our sensibilities make us relish clean and wholesome food.

So it is with the housing of people in homes and in industries. If people are forced or permitted to live and work in dark and damp rooms, to use foul and insufficient plumbing, to overcrowd in insani-tary quarters, they breed disease and vice that spread over the entire city just as infection spreads from any sore. Every city has a building code that sets certain requirements for new buildings. Due to the rapid growth of cities and to the failure to solve the rapid transit problem, there is an ever-increasing tendency to crowd buildings on lots and to crowd people into buildings, so that building codes have had to limit the amount of lot occupied, as well as the size of courts, and rooms, and have had to require a certain amount of light and ventilation and certain minimum toilet facilities. All of these things have been done in addition to prescribing standards of building materials and methods of construction that insure safety. Recently cities have gone further. They have passed codes setting certain requirements of comfort and decency for existing buildings. These codes have been accepted much more slowly than those that relate to new buildings because many owners feel that if their buildings conformed to the standards of the time when they were built, they should not now be changed. They do not grasp the meaning of the French proverb, "Your right ceases where your neighbor's right begins."

In passing laws that provide for decent and wholesome living and working conditions, the city is recognizing what Cato recognized so long ago when he said "Riches for the individual and poverty for the masses is the ruin of the commonwealth." It is recognizing that comfortable conditions for working and living will go far toward giving to the individual health of body and mind, the essentials for making him an independent wage earner rather than a public charge. We have only to go to the slums of some of our cities where human beings are floundering in an abyss of vice, disease, poverty and idleness, to see

whence come the human derelicts that will tomorrow pass through our courts and fill our public institutions. It is time that cities were recognizing not only the gross extravagance of such shortsighted methods, but the inhumanity of them. That they are recognizing this is evidenced by recent legislation. Twenty years ago not a city existed which recognized as a part of its functions that of making as comfortable as possible the conditions under which people must work and live. Today twenty-eight cities have legislation either actual or pending, to secure a minimum degree of comfort and decency in the living conditions of its citizens, and many cities are beginning to make some effort to insure more tolerable conditions for work. It is true that these laws are inadequate and are inadequately enforced, but they are indicative that the community is awakening to its responsibility to provide its people with reasonable safeguards for health and comfort. To do this, it must do more than pass housing codes that provide safe and sanitary homes, and work shop laws that provide safe and sanitary places for work. It must determine where factories shall be located and where homes shall be located. It is a lamentable fact that the majority of our homes are now placed where they are and are what they are because business has been the determining factor. We place the home near the factory so that the laborer is accessible to his work and we place the factory where it is because it is accessible to the docks, the railroads, the shops. What a sacrifice of the ends to the means! What an inversion of the elementary principle of life that we work as a means of living—not that we live as a means of working. The time must come when no factory can be located in such a way as to increase congestion of population, to destroy homes or to undermine health or blight the soul of man. That the municipality is responsible for the souls of men may be a new thought, but it is an old fact. What one of us has not seen the soul of the child die before it has been fully born because all about it was sordid and dismal? It is for this reason that the city planning commissions have ceased to interest themselves exclusively in the grouping of public buildings and the making of civic centers, and are limiting the heights of buildings and widths of streets so that tenement dwellers will not grope about in dark canyons. It is for this reason that they are becoming interested in establishing playgrounds and open space in the crowded quarters as well as in making a system of parks and boulevards that are accessible only to those who ride. The city recognizes that it is just as necessary to

provide light, sunshine, green spots, beauty in streets and buildings, as it is to provide for the disposal of waste or the control of disease; that it is just as essential to protect and foster the well being of the soul as the body of citizens, if the city would reckon its strength through the strength of its citizens.

Such are the tasks of Municipal Housekeeping. Can women, who for all ages have been the homemakers and the housekeepers of the race, be grateful enough that this is changing from an individual into a community task just at the time when women are being liberated from the chains of tradition and custom to a fuller participation in the events of life? It is doubly fortunate that their liberation coincides with the great democratic revolution that is abroad in the land today because they can take up the community tasks untrammelled by the demoralizing influence of political spoilsmen and class exploitation. Is it too much to expect that they will bring with them in the performance of their duties, courage such as John Stuart Mills had, when facing the electors of Westminster, and being asked whether he had ever said that they were "generally liars," replied simply, "I did."

THE PRESENT NEED FOR EDUCATION, FOR STUDENTS OF COLLEGE AGE, IN THE PROBLEMS OF FAMILY LIFE

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The remark has so frequently been made as to be almost a truism that the current age is distinguished by a heightened degree of social consciousness. By this is meant that intelligent men and women are becoming increasingly aware of their intimate relationships to the group life and at the same time are more sensitive to the mistakes, the needs, the reconstructive ideals growing out of the common social experience.

Ever since the second decade of the nineteenth century, when Auguste Comte wrote his Positive Philosophy with the intent to show that the betterment of humanity could only be brought about by the application of exact, scientific knowledge to the control of social experience—ever since that time enlightened criticism has been brought to bear upon well nigh every institution of society. Church, state, the law, the economic system, education, each has come in

for its share of destructive criticism and constructive suggestion. But, until very recently, the institution of the family has escaped analysis and adverse comment. The reasons for this immunity are not far to seek. The family, being the institution with which the life of each of us is most intimately and continuously bound up, is for that very reason the social organization least likely to challenge our critical attention. Familiarity has accustomed us to its anomalies, its maladjustment to present social conditions, its traditional inequities. Hence we take it largely as a matter of course that, in several states of our Union, the mother who has borne a child and has carried the heaviest share of the responsibility of rearing it, is given no rights of guardianship in that child. Neither is our critical and moral sense profoundly disturbed when we learn that in parts of our land of liberty a married woman is still denied the right to control her own property and earnings. Again, the double standard of morality, which stamps with ignominy and shame the woman who falls from virtue while it bears lightly upon the man who commits a similar offense is so familiar as to arouse little hostile criticism. These inequitable customs have all the powerful sanction of age-long precedent. Excellent men and women in the past have lived and loved under these laws and practices and so we tend to accept and pass them on unquestioningly.

But the familiarity bred of usage is not the sole reason why the family has, until a few years ago, been fairly exempt from critical investigation. The fact that home and family life are associated with many of our deepest and tenderest emotional experiences has contributed much to their immunity from criticism. Indeed, when modern social writers began to turn their attention to this most ancient of all institutions and to point out its manifest imperfections with a view to their improvement, they were greeted with a storm of hostile comment. It is sufficient to remind readers of social literature of the bitter attacks made upon Mrs. Parsons' book, *The Family*. The author of this excellent study was not content to indicate certain points where the machinery of family organization was creaking loudest and seemed most in need of careful investigation, but she went further and suggested possible means of reducing friction. It was this constructive suggestion that brought forth an outburst of angry and, on the whole, unintelligent criticism—chiefly from the pulpit.

But, during the last five years, students of social history in the making cannot fail to have noted a gradual change in the attitude of thoughtful men and women toward all problems of sex and family life. There is evident today a disposition to analyze these difficult questions with impartiality and in the spirit of scientific investigation. This augurs well for the future; for, if the true function of intelligence be to effect more satisfying conditions of life, in the broadest sense of the term "life," surely every phase of human experience will profit by the beneficent influence of man's enlightened reason. "Let there be light," then, upon every nook and corner of the social life of man—the light of knowledge and constructive thought.

With respect to the family institution this campaign of enlightenment, conducted by the leaders of thought, should not rest content with educating adults to an appreciation of existing evils. It has an even more important office to perform in the instruction of youths and maidens, the homemakers of the future, in order that they may avoid some of these mistakes of their forebears. To this end there should be wise education in the facts of sex life and reproduction, as well as an awakening of the conscience of the nation's youth to a sensitive regard for the social obligations involved in marriage. Is it not an amazing fact that the majority of parents permit their children to form their ideas of the marriage relation almost wholly from the chit-chat of adults and the frequently sentimental and unsound theories of fiction? The need of the age for young men and women who have been educated for their future dignified position as the founders of new households, the fathers and mothers of a future generation, is profound. Surely we cannot longer neglect our manifest responsibility to furnish this instruction.

Such an education would, of course, have regard to the training of girls in the science and art of homekeeping, in the knowledge of food values and food preparation, in understanding of the essential laws of hygiene and sanitation as applied to the home, in the appreciation of color, form and texture as these are related to house furnishings and dress. But it would likewise give honored place to courses treating frankly and scientifically the history and present status of the family, the problems involved in marriage and child-rearing in our present-day artificial society, and the whole difficult matter of sex life and sex relationships in both their personal and

their social bearings. Let young men and women be made acquainted, at latest during their college course, with the various solutions of these troublesome questions with which our social literature abounds. Let them be taught to face these solutions squarely, to analyze, understand, and evaluate them in the light of the general social welfare. If the students' sociological courses have been presented by teachers not only well informed but morally in earnest, sound social standards and a tender social conscience will have been developed to a greater or less degree within the class. Equipped with such weapons of defense, young men and women may safely read and estimate the diverse theories advanced by modern social writers possessing wisdom and unwisdom in various degrees. On leaving the college life for life more completely in touch with vital problems and realities, our graduates will be forewarned and forearmed. As intelligent members of society, actively concerned in its betterment, as future homebuilders, and parents, they need this intellectual and moral enlightenment. A thorough and impartial course on the development of domestic institutions and laws would do much to orientate the hostile critic of modern family conditions and render improbable the spread of that antagonism toward men as the "oppressors of womankind" which is even now too general among ill-informed persons. No one can study the history of the family in a liberal spirit without realizing that the narrow sphere of women in the past and the restrictions laid upon them were the outcome of economic and social conditions rather than the deliberate tyranny of man.

Higher institutions should remove the stupid taboo from these subjects, and should arrange intelligently planned and closely knit courses concerned with sex, marriage and family life in all their phases. These should be assigned to specially trained instructors whose exact and thorough knowledge is equalled by their moral enthusiasm. In such education lies the truest hope for the betterment of the race through the family.

THE HOUSEKEEPING CENTERS OF NEW YORK

MABEL HYDE KITTREDGE

President, Association of Practical Housekeeping Centers

Because there has been a definite recognition and growth in New York City of the housekeeping-center idea, a short history and reason for this growth may be of interest.

What is a Model Flat, or Housekeeping Center? It is the natural expression of the homemaking instinct which is in every girl. This instinct expresses itself first in making a doll's house, or in constructing out of chairs and shawls and with imagination a place large enough to be actually crawled into and be called a house.

Thirteen years ago, fourteen little girls and myself, acting on this homemaking instinct, made a real house out of four tenement rooms, situated in one of the most congested districts of New York. The way the walls were painted and the floors treated, the kind of curtains, the manner of furnishing, were the natural expression of that group's idea of beauty. Having furnished our home, the next step was to take up the study of homemaking in the same practical, personal way.

It mattered little to these small housekeepers that at the great colleges food values were being chemically worked out and domestic science taking its prominent place in the world. Windows were washed at the "Flat" (as it was called), until the best way to wash windows was found. The course in plumbing grew from the very interest that was taken in keeping the pipes of the bath room and the sink in a sanitary condition. Cooking was mastered, not by a scientific and proper balancing of food learned from any book or studied in any school room, but because dinners were served in the Flat. The girls planned the menu, did the marketing, cooked and served the meal to their own guests, and had all the enthusiasm and thrill of a hostess. Then they learned to wash dishes, and scrub the table, and leave the Flat absolutely clean—because they loved the work and loved the place they worked in.

The common, homely, housekeeping duties have become an art for two reasons: First, the world has waked up to the realization of the beauty in simple things. In the remarkable Altman collection of pictures at the Metropolitan Museum in New York, it is the woman peeling potatoes that attracts attention, not only for the perfection

of the work but for the charm of the subject. It is the every-day, homely acts of a woman's life that call out our admiration—the mother bathing her child, or the woman and man plowing in the field.

Health is the next reason why homemaking has stepped forward in the rank of science. Take one example: It is known now that the sweepings from our streets contain poison; that with the natural dirt of the streets—manure, soot and pavement dust—are mixed human sputum and the slobbering of animals, and that this mixture clings as mud to the boots and the clothing of human beings and is carried into the homes. There it dries, mixes with the air, and the dust and disease germs find a lodgment in the lungs of the occupants; or, after being pulverized by the action of traffic, this dust blows in through the doors, windows and cracks of our homes and must be removed before it can do its deadly harm. And so dusting, sweeping and cleaning the home have become acts of vital importance; they are the great preventives of disease, and no doctor in his laboratory working over his preventive measures is any more important than is the housekeeper who dusts with her damp duster, and dusts well.

Another seemingly simple, but really great, discovery that has been made is that children have an object sense, and that as they actually handle things their minds grasp the idea. Tell children forever about chemistry, even show them experiments with baking powder, soda, yeast and eggs, and they cannot adapt this knowledge to every-day life, but let these children work in the only kitchen that to them is a kitchen (one like home), let them mix the muffins and the cake, and test the oven, and see the effect of baking powder, and why it can be reduced in quantity if an egg is put into the muffin as well, and the lesson will never be forgotten, because their hands have worked out the problem for their minds.

We all want real things. A little child will play with the kitchen-garden tools for a few months; the doll's bed, the tiny dishes, the game of how to wait on the door, please for a while, but then the girl throws away these childish things and wants to play house in the real way. And so New York is giving her these real natural tools to work with. The housekeeping center at 226 Henry Street is now a part of the nearest public school at Jackson and Monroe streets. The pupils of that school in groups of fifteen fill the model home from nine until three; and the Board of Education pays for the teacher. Three groups a day walk from the school to the flat and actually keep house for

eighty minutes. Sometimes it is a cooking lesson, at other times they scrub and clean. The question of garbage is so thoroughly understood, and the responsibility of each individual, that those girls know that the Street Cleaning and Health Departments are helpless to do this cleaning-up work alone, and each girl is taught what her part is in this garbage disposition work.

Public School 7, at the corner of Hester and Christie streets has, with the aid of the Housekeeping Association, actually built a model of a home in the school building. Nothing is lacking from the kitchen, the bedroom, the living-room or the bath room equipment; and there every week over two hundred pupils study the great homemaking problems.

Next door to Public School No. 4 Manhattan, on Ridge and Rivington streets, an ordinary tenement-house flat has been fitted up and made into a model and homemaking laboratory for the pupils. This flat was entirely furnished by the girls. When the time comes for any one of them to have a home of her own she will know how to make everything from the curtains to the cleaning cloths, because she has done the work in the school home. The Housekeeping Center at 162 Sullivan Street, which has for so many years been the model and the workshop of that Italian neighborhood, is now to be connected, during school hours, with Public School 38, four blocks away. After school and every evening the old neighborhood work will go on as usual. The neighbors would not get their vegetables canned or their fruit put up for the winter without that Center.

School No. 4, in the Bronx, has its Housekeeping Center, and two other large public schools have permission to install these natural home plants next door to the school building. No longer is the instruction without the scientifically trained teacher. Only those who know the great laws of food and of sanitation so well that they can make them a part of every-day life can teach in the Model Flats, which belong to the Association of Housekeeping Centers and New York Public Schools.

At last the girls of our schools are to have what they want and what they have always wanted, because we grown-up people have learned our lesson, that if we will let them use their hands in a natural way their minds will take in the lesson we want to teach.

CREDIT FOR HOME WORK

HETTIE M. ANTHONY

Missouri State Teachers' Association

Among the first to make use of school credits for home work was Mr. Alderman of Oregon, who made this a method of bringing the school and home in closer touch and helping the children to realize that work done at home had dignity, and was as well worth while as school work.

He says:

The idea of giving school credit for home work first occurred to me nine years ago when I was a school principal. I had noticed that one of my rosiest-cheeked, most vigorous appearing girls spent much time on the streets after school. One day Mary's mother was pointed out to me. She was a pale, nervous little woman who was evidently overworked. Knowing that the family was large and not very well-to-do I felt myself burning with indignation at the circumstances that were drawing Mary away from interest in her home. I thought, "What is the use of my teaching that girl algebra and general history, when what she most needs to be taught is that her mother is her best friend and needs her help?"

At the algebra recitation the next day I announced that the lesson for the following day would consist of ten problems as usual, but that five would be in the book, and five out of the book. The five out of the book would consist, for the girls, of helping cook supper, helping with the kitchen work after supper, preparing breakfast, helping with the dishes and kitchen work after breakfast, and putting a bedroom in order. When I asked for "hands up" on all the problems the following day, I noticed that Mary kept hers raised after the others were down. "What is it?" I asked. "I worked five in advance," she replied with sparkling eyes, "I worked five ahead in the book, besides the ten that you gave us." From that time Mary's interest in all school work was doubled. She was right in the first rank. The rest of the year we regularly talked over the girls' home work. School public opinion encouraged the girls so that more and more reported on what they had done in housework and sewing, and felt proud of it. Best of all, our discussions brought the school and the home together. The year was successful for all of us. More parents visited the school, and there was a concerted movement for the betterment of school conditions.

The school credit plan for home work is to have the school recognize home work as well as the home recognize school work. Many girls and boys cheerfully do work at school, but when the school hours are over, they feel that their duties are discharged, they look upon home work with contempt.

One mother said, "When you (the teacher) ask Fay to perform home duties she goes at them cheerfully and thinks them worth while, but when I (the mother) ask her, she either refuses or performs them grudgingly." The student, as well as the teacher, seems to have the traditional reverence for the text book. Many efforts have been made to depart from the text and make the work of the school and home go hand in hand, but facts are still learned *as facts*, and not for use. As was once said of the study of chemistry, one of three results were looked for and obtained, an explosion, change in color, or an ill smelling odor, and here the experiment stopped with no realization that almost every act and change in life was applied chemistry.

The real purpose of education in the public school system is to make good citizens and good home makers, yet many act as if the purpose is to make of all of them teachers or encyclopedias of facts.

A prominent educator said last summer, that he would rather have his girl, if necessary, spend two or three days in the home kitchen working out a problem, than come to school, stand at a laboratory table and not realize that the problem was a life problem, not to be applied in the class room but in life.

Outside work may be and often is highly educative and the extra time the pupils spend either during the school year or during vacation is well used if spent in doing wholesome, honorable, thought-inspiring work. Pupils may be encouraged to seek employment during spare time and often the citizens will aid and become interested in the schools. While the remuneration is important to many, the intellectual and moral value of work well done is of inestimable value to all.

Habit is a strong master and if the children are allowed to shirk responsibility of home and life work until school days are over, and are found wanting when expected to step at once into life's responsibilities, it is not their fault. Many a hard working mother has spared (as she thought) her daughter the drudgery of home work until she acquired a home for herself, with a result that the profession of homemaking became a burden or she utterly failed to make good in it.

The objection is often raised that there is no way of determining the quality and standing of the work. In a measure this is true, but better coöperation is had when the teacher trusts the parent as well as the parent the teacher and although in some instances it may be found to fail, on the average the results are good. Many teachers have reported that results were better both at home and school for this coöperation and many boys have been kept in school longer by showing them that their efforts outside were recognized; and they remain in school for an education that their outside work may demand greater recognition and compensation.

The twelve month school has been tried in Cook County; three months was largely home work but recognized as school work. We give the result as reported by Mrs. Agnes M. Page, principal of the Morton Grove School. (Quoted from a newspaper clipping.)

To prove the value of the plan I need only to introduce one of my boys who made two grades in one year in addition to his work in the fields.—Harvey Brooks, a 15 year-old pupil of the Morton Grove School then told the teachers how he had made \$200 during the summer months by the cultivation of fifteen-sixteenths of an acre of land rented from his father, a florist. "And I received a letter from George Mittendorf, a South Water Street vegetable dealer, telling me my radishes were the finest specimens he had obtained this year," said young Brooks.

The principal of the first twelve-month school in the United States, described his methods for the teachers. His twenty-nine pupils already have "banked" \$828 in net profits and are not through marketing their products.

Methods of giving this credit or recognition may differ widely, but in every case it should be properly reported and satisfactorily done. Last year over 6000 boys in the Philippines received school credit for raising corn. Venice High School, California, has worked out a successful plan as follows:¹

Extra credits on pupils' standing may be earned by their doing additional work during the school term or during vacations, at school or elsewhere, on the following conditions: Pupils may receive credit on their school records for extra school work, for outside athletics, music, home work, gardening, office work, mechanical work, newspaper work, reading, travel, school activities not included in the regular courses, and other

¹ Copied from pamphlet issued by Venice High School, Venice, California.

educative efforts, when such extra work is done in a systematic and thorough manner, and in amounts that make it of positive value. Pupils desiring such credit must present to the principal two reports of the work for which the credit is asked—one report to be made out on a blank furnished by the school, and to be signed by the employer or the one superintending the pupil's work for which credit is desired; and the other to be prepared by the pupil and to consist of a brief written description of the work done. On the approval of the principal the teacher in charge of the subject to which the pupil desires to have the credit applied may permit the pupil to give an oral report, in the presence of the class or the entire school, in lieu of the written description. The amount of credit to be allowed in each case will be determined by the principal in consultation with the teacher concerned.

The aim of the plan here indicated is to encourage pupils in independent, systematic efforts to accomplish worthy objects. It is the hope and belief that such efforts will lead to an application of training, and that they will bring about a closer correlation between the school work and the home life and civic life of pupils.

Chillicothe High School in Missouri has worked out an elaborate plan for giving credit for outside work:—One unit out of sixteen required for graduation may be received for outside work. Two units out of seventeen required for "Graduation with Credit" may be received for outside work. Three out of the eighteen required for "Graduation with Honor" may be received for outside work. The term "outside work" as interpreted in a pamphlet issued by the Chillicothe High School may include music (either vocal or instrumental), literary work inside or outside of school (debating, public speaking, etc.), work in any of the local trades, home tasks, etc. All of these and many other things can be done for school credit. A definite statement of the amount of credit given in each different phase of work is published in the school pamphlet.

A feasible plan seems to be to raise the promotion grade from pass to fair, or fair to good, etc., for having done one hour a day systematic home work, or the holiday plan of giving a half or whole day holiday to the ones having recognition for outside work, this holiday under the direction of a teacher to be spent in visiting a model farm; an ideal home as to building or furnishing; a good store for selecting good furniture or colors; or any educational excursion the neighborhood affords.

The results in all cases where the teacher has given it a fair trial and taken the right interest have proven a help to both the school and the home.

With some of the younger children, to whom charts were given to be marked daily, the results were good. Two girls acquired the habit of daily washing the teeth, several of sleeping with the windows open, and three mothers report much more help from their girls. All of this is well worth while and will add to the health and efficiency of citizens. The school from now on should more and more recognize that whatever a child does that is worth doing and is well done has an educational value.

TEACHING HOME ECONOMICS IN RURAL COMMUNITIES

HANNAH P. WATERMAN

Extension Department, State Normal School, North Adams, Mass.

Our great leader in realizing the possibilities of country life in Massachusetts has been the Agricultural College with its resident courses, farmers' weeks, summer schools, rural conferences, extension service and its strong leadership in every phase of rural understanding and growth.

For the women in rural communities, perhaps, the work of the Home Economics department has brought most welcome variety and service. The canning demonstrations that have helped to successfully conserve the delicacies of summer for the winter's menu, the talks that have given new ideas for cooking and serving and have reimpresed the well-known yet half-forgotten reasons why some habits of cleanliness and of carefully selected diet were good, and above all the inspiration that came from realizing that we belonged to a sisterhood of women aspiring to make housekeeping a science and economy an art has helped homemaking to continue worth while. They have revived the feeling that domestic art is even worth the effort of growing daughters.

In this education of the daughters, the normal school at North Adams is vitally interested. We believe, with the college, that the country girl has every right to the good training in Home Economics given almost without question and by a specially trained instructor to her city cousin. An opportunity to know how to utilize farm products in cooking well-balanced, palatable, daintily served meals seems her

rightful heritage, and a warm lunch for the girl or boy whose morning of study is to be followed by an afternoon requiring an active brain appears a demand of justice.

We realize that specially trained instructors or supervisors of domestic science are not possible, as yet, in country towns; they might be undesirable. The regular teacher can learn to teach cooking and with it much of hygiene and sanitation. Then, too, the teacher who is with the children every day and all day knows their needs better than the occasional teacher of a special subject can possibly understand them. Our graduates go out prepared to coöperate with the community where instruction in household arts is desired. The enthusiasm of our instructors is contagious and in the rural training schools they have learned how to fit such instruction into the school program.

The college, however, often finds response from some section where the teachers have never prepared a meal and the wish for school instruction in cooking arouses a sense of helplessness. The appeal for assistance from such teachers is always welcome and among those who enroll for a course in cooking by correspondence are some of our most resourceful rural leaders.

To such students we recommend the equipment absolutely necessary for a rural school if it has not already been given. When we know the number of children, their approximate ages and something of their resources we furnish a suggestive outline for lessons to be given during the school months,—an outline subject to whatever change conditions justify.

The teacher is given definite directions for finding which recipe fits the immediate needs of her school, arranging for obtaining materials and for planning and conducting the lesson. She is given a cook-book of classified recipes which have been prepared by our instructor in domestic arts and served with success by children. Instructions for having the children make their own cook-books follow easily. The student's lessons are guided by notes so grouped as to include the forms of cooking taken by students in residence and to allow the student by correspondence to take them in the order most advantageous for her children.

The student holds sanitation clearly in mind throughout her course. Cleanliness of person, clothing, materials and utensils, the proper disposal of waste and the care of kitchen and dining-room furnishings are

fundamental to every lesson. A study of composition of foods, the value of variety in the menu, and proper diet for growing children as well as for manual laborers, brain workers or invalids lends interest to the preparation of each lesson and appeals to the problem of balancing menus, while the discovery of meat substitutes and of new ways of cooking common products becomes absorbing.

The children enjoy the work quite as much as their teacher, perhaps, and in their growth in responsibility and womanly qualities lies part of her recompense for having summoned the courage to enter a new field of leadership among them. The feeling of power which comes from having mastered a problem worth while is a reward in itself and the growing sense of companionship with her children and her children's parents renders her teaching a friendly service.

ASH CONTENT OF CANNED VEGETABLES, WITH SPECIAL REFERENCE TO CANNED PEAS¹

AGNES FAY MORGAN

That the ordinary methods of cooking vegetables do not conserve the inorganic compounds present has been shown in several instances. This fact was first pointed out by Snyder² at the Minnesota Experiment Station, who worked with carrots, cabbage, and potatoes, as typical vegetable foods. The results of his experiments showed that the loss of salts in these vegetables is proportional to the surface exposed, and is increased by the use of cold water at the beginning of the cooking. The removal of the skins of potatoes increases immensely the salt loss.

The losses involved in discarding the water in which certain vegetables have been cooked have been determined experimentally by Miss K. I. Williams³ who found, for example, that the loss in ash in the case of butter beans was 5.54 per cent and in the case of soy beans, 13.39 per cent. These determinations were carried somewhat further, in work published in 1912, by Miss Berry,⁴ who compared the losses

¹ Presented in part fulfillment of the requirements for the degree of Ph.D., University of Chicago, 1913.

² U. S. Dept. Agr., O. E. S. Bul. 43.

³ *Jour. Am. Chem. Soc.*, 26 (1904) no. 3, pp. 244-252; 29 (1907) no. 4, pp. 574-582; *Jour. Indus. Eng. Chem.*, 5 (1913) no. 8, pp. 653-656.

⁴ *JOUR. HOME ECON.*, 4 (1912) no. 5, pp. 405-412.

involved in steaming green vegetables with those involved in boiling them in water. The results of her experiments showed that steaming instead of boiling the green vegetables, e.g., spinach and cabbage, effected a very considerable saving in total salts, phosphorous, calcium, and magnesium.

Maurel and Carcassagne⁵ reported a considerable amount of data on the loss of ash and particularly of potassium oxide in the cooking or "blanching" of vegetables. Vegetables cooked 20 minutes were found to sustain a loss of total ash as follows: Cabbage, 55 per cent; asparagus, 35 per cent; Brussels sprouts, 44 per cent; cauliflower, 40 per cent; green beans, 34 per cent; white beans, 19 per cent; celery stalks, 26 per cent; lentils, 33 per cent; celery leaves, 37 per cent.

Corn, barley, wheat, white beans, lentils, dry peas and potatoes were boiled in water for three hours. These cereals were found to lose 38 to 57 per cent of all their mineral content, and of this 43 to 55 per cent consisted of potassium oxide or carbonate, the vegetables lost 30 to 61 per cent of total salts, 54 to 89 per cent of which were potassium salts. Most of the extraction took place in the first hour of boiling. It may be observed that the blanching for 20 minutes caused very nearly as large a total loss of salts as the three hour boiling. The French practice of "blanching" vegetables, in which they are par-boiled previous to the final cooking, appears thus to have a serious effect upon the basic or antiscorbutic properties of the vegetables. These investigators have reported other highly valuable data as to mineral loss, particularly potassium, in the blanching of a long list of other foods, as tomatoes, beets, carrots, spinach, etc.

In 1905, T. Zschokke⁶ published the results of his work on comparative losses in steaming and boiling vegetables preparatory to canning them. Carrots, beans, and peas when steamed instead of boiled as in the usual method of blanching before canning, were found to become soft 3 to 5 minutes sooner than samples cooked in water. The water in which the vegetables were boiled was found to be cloudy, and green in color in the case of the beans and peas, and yellow in the case of the carrots. When the same vegetables were steamed the water was neither cloudy nor colored.

The writer has attempted to determine the amount of mineral loss in the canning of peas by the usual commercial process as compared

⁵ *Compt. Rend. Soc. Biol.*, 67 (1910) no. 25, pp. 91-93; no. 26, pp. 211-213.

⁶ *Landw. Jahrb. Schweiz.*, 19 (1905) no. 9, pp. 619, 620.

with the loss in the home-canned product. The usual canning process is described in considerable detail by A. W. Bitting.⁷ The points in this technical process which might well affect the mineral content of foods are the blanching, the strength of brine used, the temperature and length of time of processing. By processing is meant the heating of the filled and nearly closed can under high steam pressure.

The blanching is a universal procedure in the case of most vegetables, certainly in the case of peas. Duckwall⁸ directs that peas be blanched by boiling water "to remove mucus or slime, and a bitter principle." Bitting says that "vegetables should be kept in boiling water from one to five minutes to cause softening, and at the same time to remove some of the mucus substances which form upon the surface. The effect produced by a short boiling in the open as compared with boiling in a closed can is surprising. In another bulletin⁹ Bitting says,

There are two objects in blanching peas: (1) To remove the mucus substance from the outside and a part of the green coloring matter, so as to have a clear liquor in the can; and (2) to drive water into the peas, so that all will be tender. In the young juicy pea, the water content is at its maximum, so that the cleaning of the surface is all that is necessary. To get the best results, peas which are very old and hard will need a blanch approximately five times as long as young peas of the corresponding grade.

The water used in blanching is in every case thrown away, the extracted material thus being wasted. According to Leach¹⁰ 2.03 per cent of the protein of the pea is soluble in water and is probably removed during blanching.

The next factor which affects the mineral content of canned foods is the strength of the solution used in filling the cans after the vegetables are packed. According to Oxborne and Campbell¹¹ 10 per cent of pea protein is soluble in salt solutions and only 2.03 per cent in water. E. Poppe¹² in 1911, reported work on the extraction of protein phosphates, and carbohydrates from dried peas by soaking in distilled

⁷ U. S. Dept. Agr., Bur. Chem. Bul. 151.

⁸ Duckwall, E. W., *Canning and Preserving*, vol. 1, p. 348.

⁹ U. S. Dept. Agr., *Farmers' Bul.* 125.

¹⁰ Leach, A. E., *Food Inspection and Analysis*, N. Y., 1907, p. 233.

¹¹ *Jour. Am. Chem. Soc.*, 18 (1896) no. 7, pp. 583-609; 20 (1898) no. 5, pp. 348-375; no. 6, pp. 410-419.

¹² *Bul. Soc. Chim. Belg.*, 25 (1911) no. 3, pp. 136-145.

water, and in solutions of varying concentration of common salt and sugar at different temperatures. He found that the more concentrated solutions extracted the least solid material from the peas, and the distilled water the most. In general the extraction seemed rather upon the concentration than the temperature.

The following figures given by Duckwall, before quoted, are fairly representative of the trade custom in liquors for all canned vegetables. He advises a brine made of 6 pounds of salt in 40 gallons of water to which 8 pounds of sugar may be added. This is 1.5 per cent of salt and 2 per cent of sugar. In reckoning the ash of canned foods this added salt is not always allowed for, and so the inconsistent statement that canned vegetables have a higher mineral content than the corresponding fresh article is accounted for. In Bulletin XIII, part VIII of the Bureau of Chemistry, United States Department of Agriculture this correction is made in all analyses.

The last factor in canning which affects the ash of foods is the temperature and time of processing. The cans are closed, capped or soldered, and placed in closed retorts into which steam is turned until the desired temperature is reached. The cans are kept at this temperature for a certain time, after which they are suddenly cooled. Necessarily the temperature and length of processing affect the amount of extraction as well as the integrity of the vegetable. Under the best trade conditions, canned peas, string beans, asparagus, sweet potatoes, and lima beans are likely to have lost in the process of blanching a considerable amount of their mineral nutrients. Tomatoes, corn, pumpkin, and rhubarb are canned with the liquor used in cooking them. Beets and sweet potatoes are cooked in their skins. Of the commoner canned vegetables in use in America, peas, string beans, asparagus, and lima beans, are those which are open to the question of avoidable waste of inorganic material in canning.

The following experiments were undertaken to discover whether the major loss of ash, occurred in the blanching or in the processing. Two different varieties of fresh peas were analyzed for total water, ash and phosphorous. One sample of the first variety was then blanched in the usual manner, and processed in the commercial style with a 2 per cent salt and 2 per cent sugar solution to cover. Another portion of the same peas was canned in the manner recommended in the United States Department of Agriculture.¹³ The same kind

¹³ U. S. Dept. Agr. *Farmers' Bul.* 359.

of brine was used as in the first canning and the jars were heated in boiling water one hour on three successive days. Glass jars were used, thereby obviating the determination of tin, which sometimes complicates the ash determinations. After a few days these jars were opened and the peas and liquor analyzed separately for total solids, phosphorous, and ash. A sample of the second variety of fresh peas was blanched as before and canned by the home method. This was also examined for total solids, and ash. In each case the water used in blanching was evaporated and total solids and ash phosphorous determined.

A comparison of the results obtained showed that there is a serious loss of ash, particularly of phosphorous, perhaps the most important constituent of pea ash, in canning by either the commercial or the home process. This loss is particularly heavy when the vegetables are blanched and the water thrown away, (18 and 25 per cent), but there seems to be also a smaller amount of extraction of salts into the liquor when the peas are processed under high steam pressure in the usual commercial way, than when simply boiled in water for two or three hours in an open vessel, on three successive days.

Comparison of commercial peas

	TOTAL SOLIDS	TOTAL SOLIDS OF LIQUOR	TOTAL ASH OF PEAS	TOTAL ASH OF LIQUOR
	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
Can No. 1.....	26.50	8.16	1.17	0.817
Can No. 2.....	14.16	5.40	0.96	1.270

The specific gravity of the liquor in each case was found to be very slightly less than one, and the acidity of the liquor equivalent to 0.323 and 0.202 grams, respectively, of acetic acid. In the case of the peas canned by the observer the liquor was found to be neutral. The striking difference in per cent of total solids seems to indicate that the peas of can No. 1 were soaked peas or else very mature (See Dubois, Bureau of Chemistry, Circular 54).

All analyses mentioned in this paper were carried out according to the methods recommended by the Association of Official Agricultural Chemists.¹⁴ The Volhard method was used for chlorin, and the volumetric molybdate method for phosphorous.

¹⁴ U. S. Dept. Agr. *Bur. of Chem. Bul.* no. 107.

Summary. The ash content of peas, blanched and canned by the usual high pressure process was found to be 46.1 per cent less than that of the corresponding fresh peas.

The ash content of peas, blanched and canned by the standard home process was found to be 50 per cent less than that of the corresponding fresh peas.

The ash content of peas, unblanched, and canned by the standard home process was found to be 22.6 per cent less than that of the corresponding fresh peas. All these percentages were calculated for the water-free substance.

The per cent of extraction of P_2O_5 in each case is rather higher than the total salt extraction, indicating a special solubility of the phosphorus compounds.

Inspection of two varieties of commercial canned peas shows a high total of salts in the liquor.

Much more work must be done on the distribution of mineral loss in canning vegetables by the various processes before any definite conclusion can be reached as to the economy of such processes.

THE IMPORTANCE OF A FOOD MUSEUM

E. H. S. BAILEY

Professor of Chemistry, University of Kansas

In teaching so important a subject as the composition of foods, one of the things most essential to a broad understanding of the work is a well supplied Food Museum. The attempt to teach without it is similar to the old time method of teaching chemistry or geology entirely from a text book without access to the laboratory or the museum. It is too much to assume that the ordinary pupil will have, from common observation, a knowledge of the sources of food products or the methods of manufacture. Pupils may have had opportunities to observe many things in this line, but in our class work the faculty of observation is woefully neglected.

A food museum should be built up for at least three purposes: First, in order to show such foods, for instance, as cereals, legumes, roots, fruits and herbs in their native or original condition, and to show the difference between that which is of good quality and that which is inferior. It is not difficult to obtain samples of all the cereals, of

pili and cashew nuts and of the locust bean, tamarind and soy bean among the legumes; yet how few people are familiar with them. Second, the common adulterations of foods may be illustrated by reference to the samples in this museum. There is a wide field for showing genuine and adulterated spices and the materials formerly so commonly used in adulteration, fraudulent samples of vinegar as compared with the genuine, and the preservatives and coloring matters which have been used presumably to improve the quality of a food. Third, and perhaps most important of all, the use of these museum samples gives an opportunity to demonstrate the various stages in the manufacture of foods, the variety of their by-products, and finally, the different grades of the food stuff as it appears upon the market. It is not difficult to obtain a complete set of samples illustrating the manufacture of sugar from the sugar cane or from the sugar beet. The preparation of rice from the field to the kitchen furnishes an interesting set of specimens.

The expression "built up" has been used advisedly, for a good museum grows by constant accretions. One set may be added from a reliable seed house, another from the flour mill and a third from the confectioners. It is only necessary to be constantly watching for suitable material, and the museum will soon become of great value for illustration.

Manufacturers of special food products are usually perfectly willing to furnish a set of the products which they put on the market, if they understand that these samples will be on display and will be used for illustrative purposes before a large number of students.

The permanent character of an exhibit of this kind should also be noted. The liquid samples can be put up in uniform bottles, containing from 8 to 12 ounces, and the solids show to best advantage in the well known inverted show bottles of about 8 ounces capacity. Cereals, seeds, etc. should be stored for a while to see that they are free from insects, before they are permanently installed in the bottles. The cork may then be covered with sealing wax, to exclude the air as far as possible. Samples put up in this way will keep without any deterioration for many years. If the labels become indistinct, they are readily renewed.

EDITORIALS

The Art Side of Home Economics. Mrs. Richards once said, "We are making the home better and more efficient on the practical side. But we must not forget the *play* side. Women should have not only satisfaction in reaching a given end but a joy in the doing of it."

There are those who feel this joy in the plainest surroundings and working with the simplest tools like the man who said: "All my life I have found a great deal of poetry in just plain prose."

Miss Warner in her article printed in the January JOURNAL says: "Art marks the eternal distinction between drudgery and work." And she quotes William Morris as saying: "The art in a thing is the living expression of the joy of a man in his work." "Art is the doing whatever has to be done in the best way in which it can be done." In all this there is much comfort for those who feel that they have had little opportunity to express themselves in any form of beauty. But though we may believe that "art was born of utility" we know past all denial that most people need help in working out their artistic expression in daily life. Every conservatory of music now gives extension courses in musical appreciation where the growth and development of music is shown and its simplest forms illustrated on the piano. Where are there open to every housekeeper art appreciation courses which shall prove to the doubting the true values of color in wall paper and decorations, and teach us to demand of the manufacturer furniture and dishes of beautiful design? And what artist among us will lay aside for awhile the painting of landscapes and portraits and teach women how to dress and how to circumvent the ignorant photographer who, secure in his maxim that "the camera cannot lie," knows not the elements of the art of posing a sitter so that that valuable and well meaning instrument is enabled to tell the truth? Until the trained artist leaves the confines of the studio and picture gallery and is seen in our streets and enters our doorways with helpful word, we shall live un-beautiful and therefore unsatisfied lives.

Institution Economics Section. As we go to press, we hear that the Executive Committee of the Institution Economics Section is holding a meeting at Lake Placid, New York, by invitation of Mrs. Melvil Dewey. This section will hold its annual meeting at the Lake Placid Club from June 26 to June 30, 1915. Ample provision will be made for the discussion of the essential problems of institution economics, both in the general program and by smaller groups interested in specific questions.

The meeting will be open to all who are interested in the institutional phases of Home Economics. The fee for attending or associate membership is two dollars for those who are not already members of the American Home Economics Association; for such members the fee is one dollar.

The program will be announced in the next issue of the JOURNAL. That issue will consist largely of the addresses given at the last annual meeting of the Institution Economics Section.

Material for Teachers. In response to our suggestions in the December JOURNAL we learn that Teachers College publishes a list of teaching materials and laboratory supplies for household arts which will be found useful for teachers. This may be obtained for 10 cents from the Bureau of Publications, Teachers College, New York City.

HOUSEKEEPERS' DEPARTMENT

WILL THE PARCEL POST REDUCE THE COST OF LIVING?

Mr. John C. Koons of the United States Post Office Department has said recently that what we should be talking about is not the high cost of living but the high cost of selling. According to government statistics "the value of the products of this country amount to \$8,000,000,000 a year; \$2,000,000,000 remain on the farms. When the \$6,000,000,000 of produce sold reaches the consumer, he pays \$13,000,000,000. That is, it costs \$7 to market every \$6 worth of produce."

It would seem that in the journey "from farm to family" our food products have paid too heavy a toll to the many hands through which they have passed, and the most rational way of adding to our \$6 worth of produce is to save something from the \$7 distribution bill. To help toward this result was one of the ends in view in establishing the parcel post. The Post Office Department has seemed to make the greatest efforts to bring producer and consumer together. Special stamps are no longer required, the maximum weight allowed for packages has been increased to fifty pounds and in thirty-two of the larger cities the post office furnishes a list of the addresses of farmers and the products they have for sale.

Still, it must be owned that results are disappointing, and it would seem from the very lack of the despised middle man; some one seems to be needed to attend to correspondence and to adjust mistakes, in short, to keep a standardized product moving without too much friction between producer and consumer. For instance, a city housekeeper wrote to fifty farmers whose names were found on the post office list, but received answers from only one in seven. Those who did not reply had doubtless sold out since the list was printed, but a good business house that could no longer furnish what it had advertised would have replied to that effect and thus kept the good will of a possible customer. Postage, time used in correspondence, and final disappointment in the character of what she received sent this woman back to the old way of buying.

Again, there is much difference of opinion as to how the margin between wholesale and retail prices is to be distributed. The farmer wants it to pay him for the bother of wrapping and sending a small package instead of selling his produce wholesale; the housewife wants it to compensate her for taking more time in correspondence and buying what she cannot examine beforehand. The buyer should make a definite and just proposal. One man reports buying every week five dozen eggs from a farmer living in the second zone from his own home. After the cost of postage and of the containers is added to what his local dealer offers to the farmer, there is a margin of six cents a dozen below the city retail price, which is divided between them, and both are satisfied.

Let no housekeeper who is trying to use the parcel post in buying food be discouraged because of a few failures. We can not expect that what is nothing less than a revolution in methods can be smooth running and successful after a year or two of trial. The post office promises still further helps, such as frequently corrected lists of farmers and their products and prices, these lists to be delivered by letter carriers to every housekeeper in town and city. Again, farmers will certainly coöperate as do farmers in Europe, for marketing their produce; the buyer will in time be ordering from a central office which handles the produce of its fifty farmer members, and this will greatly help the supply to meet the demand in a regular way.

FOR CLUB STUDY

At the request of Miss Helen Louise Johnson, Chairman of the Home Economics Committee, General Federation of Women's Clubs, the Journal has selected the above article for study in women's clubs.

Suggestions. City housewives who have made connection with the farmer (according to our advice in the January number), or better still, with a group of neighboring farmers, should buy a stout hamper for general produce or a number of egg containers, and make a patient attempt to get into cordial and helpful relations with the producer. If difficulties arise, ask advice of your post master or write to the Parcel Post Department in Washington. Coöperation with your neighbors in order to divide a larger order is strongly advised.

If the town in which you live is too small to be furnished through the Post Office Department with frequently revised lists of farmer producers, advertise in a paper known to have a good circulation in the country;

many newspapers have recently started a parcel post advertising column. The buyer must remember that the cost of marketing a small order is greater in proportion than that of marketing by the barrel or carload. After all expenses have been deducted the difference between wholesale and retail prices should be equitably divided. Personal acquaintance between buyer and seller is very desirable, and often leads to a regular arrangement for a week-end hamper to be filled somewhat at the discretion of the farmer. Let the Journal know the results of your effort.

"MADE AT HOME"

ANNA BARROWS

Teachers College, New York City

Readers of the JOURNAL are asking for help in deciding a question that is always pressing—Shall the baking, the washing, the sewing and other work be done in or out of the house? We are no longer saying that conditions vary so greatly that each housekeeper must decide this question for herself. There are certain principles that can be worked out for all.

Not many years ago every household was in much the position of Robinson Crusoe and depended upon its own resources for shelter, clothing and food. Now the pendulum has swung so far in the reverse direction that few persons know the whole of a single trade. The average individual today would go hungry and naked if suddenly forced to feed and clothe himself.

In these highly specialized days we are questioning whether it is wise to manufacture anything at home. This will be found to depend upon two factors: 1. The quality of the product made at home as compared with the commercial product. 2. The value to be put upon the time of the person who does the work at home.

First, as to the quality of the product. The word "homemade" is likely to be spoken in two widely differing tones of voice, each showing the attitude of the speaker toward the article under discussion. Sometimes our appreciation or depreciation is based wholly upon our own skill or lack of it. We admire fine needlework, drawn work, handmade lace, although they have their origin in the lowliest homes; we realize that their maker possessed skill which we do not. On the other hand we may despise homemade garments of our own manufacture, or refuse to attempt them because we realize

our own lack of skill to reach a certain acknowledged standard. The very core of the question is, Who makes these standards?

We undoubtedly have one standard for what is intended for home consumption and another for what must meet the commercial demand,—the latter must be salable. Whatever is made at home is likely to possess an individuality seldom found in articles manufactured in quantities. Homemade generally implies hand rather than machine work and in most cases more head is necessary to direct the hand than the machine. Some people highly prize this method of family or self-expression. Here is the field of sentiment rather than of economic values.

If we look over the common necessities of life we shall find that in some cases we scorn the homemade and in others have an almost superstitious reverence for it. There is a traditional reverence for homemade bread not wholly justified by the quality of bread found in the average home. It is eaten at home where criticism is modified by tradition. We employ the caterer for social functions and cheerfully eat stereotyped dishes like oyster patties, chicken croquettes, lobster salad, and cakes and ices, over and over at every reception rather than venture outside the conventional routine and serve home-made refreshments. This is generally because we think the home-made products cannot meet the public standards, whatever they may be.

In household furnishings there is now an effort on the part of most intelligent persons to make their homes express themselves rather than to accept them ready made from the hands of architect, builder and decorator. This is a welcome sign, but to make the effort successful requires innate good taste and much artistic training on the part of the homemaker.

We come now to the question of comparative cost—a question to be settled not by sentiment but by cold figures. Manufacturers tell us that of the two factors, material and labor, which determine the cost of an article, labor is far more important. In the home, indeed, material may be a by-product of no value unless used in home manufacture—a familiar instance is refuse fat from which the house-keeper of a former time made her soap. It is in her valuation of her time that the greatest mistakes are made in calculating the difference in cost between the homemade and the commercially made.

Who will send to the JOURNAL records and comparisons along these lines?

HOME ECONOMICS FOR FARM WOMEN OF 'THE SOUTH'¹

The county women agents who during the summer have been teaching southern girls to can their garden products and tend poultry will continue during the winter to make other practical demonstrations in Home Economics for such farm women as desire them, if the plans materialize which the U. S. Department of Agriculture hopes to carry out in coöperation with the state colleges. These women will have the club members grow winter gardens. It is also proposed to have capable county agents make demonstrations in such lines as the following: utilizing canned goods in cooking, bread making, use of fireless cookers, preparation of vegetables from winter gardens, home-made step and labor-saving devices, and similar subjects. Thus the Girls' Clubs work will be carried into the home, and mothers as well as the girls in southern rural communities may become acquainted with the most up-to-date methods of housework.

CARE OF PALMS AND FERNS IN WINTER¹

Palms. Palms are much used for interior decorations where there is no direct sunlight. Regular watering is essential, with especial care not to overwater. It is better with most palms to keep them a little dry than too wet. Where a pot is in a jardiniere especial care must be exercised not to have them too wet.

While small, wash the foliage occasionally with soap suds made from a good soap. Immediately follow with a thorough rinsing. When too large for this, spray the tops frequently with clear water.

Browning at the tips usually comes from trouble at the roots: first, overwatering; second, worms on the roots; third, lack of plant food. The first is the trouble in nearly every case. The worm that gave the trouble is not the ordinary earth worm, but a little white harmless looking creature that emerges into the air as a small fly. Dissolve a piece of quick lime as big as a tea cup in three gallons of water. After it is through sputtering and the milky mixture has cleared, pour off the clear part and soak your soil with it. Do not dilute, for the soaking should be thorough. To provide plant food, stir small quantities of bone meal and wood ashes into the surface or in place of ordinary watering occasionally use manure water or ammonia

¹ Office of Information, U. S. Dept. of Agriculture.

water (a teaspoonful of ammonia to a quart of water). Trim off the brown tips, as they will never recover. If the leaves turn yellow, look for scale on the under side and be sure you are not overwatering. Wash the scale off or spray with kerosene emulsion or whale-oil soap, or some nicotine preparation.

Ferns. Ferns as they come from the florists prepared for indoor culture should be placed in a strong light, though they grow well without sunlight. They should be watered sparingly but should be kept moist at all times. Improper watering, especially keeping the plant soaked or permitting it to get dry, is the foundation of most fern difficulties. It is especially difficult not to overwater when the fern is in a jardiniere, where drainage is necessarily poor. In spring and summer they will require three times the water necessary in fall and winter.

It is well occasionally to put them in the bath tub and give them a bath with weak soap suds made from a good grade of soap. The soap must be thoroughly rinsed off immediately. Great care must be exercised not to injure the fronds as they are very tender. Mealy bug is one of the worst enemies in house culture. This is a white woolly insect that works close to the bottom of the fronds. If found, the plant should be examined every day and all insects removed by a splint or tooth pick. If the pest is very bad, cut off all the top of the fern within an inch of the ground, treat thoroughly each day till all insects are exterminated when a new top can be grown.

Red spider is a minute sucking insect that thrives in a dry atmosphere. It can be kept in check by spraying the top with clear water. In living rooms this is frequently impracticable. The next best thing is repeated baths. The aphid or green fly is also eradicated by washing.

Ferns should be fed once in two to four weeks in the place of ordinary watering with dilute nitrate of soda (a heaping teaspoonful to a quart of water), ammonia water (a teaspoonful of ammonia to a quart) or manure leachings. Prepared plant food or a little sprinkling of ground bone and wood ashes also gives satisfaction.

UTILIZING THE WORKMAN'S DULL SEASON

"Is it a hurry order?" asked an upholsterer regarding the sofa that was to be done over. "Then it will cost you \$40.00 but if you can wait and let me take it to my shop while you are away in

the summer I can afford to do it for \$25.00. This is our busiest time and I have to pay an extra price to good men."

The woman who thus saved \$15.00 on one article of furniture has inside painting done at a lower rate in the winter when it is too cold for the men to do outside work; she has also found that at the turn of the seasons when the old stock of wall papers must be gotten rid of to make way for the new, it can be bought at the most surprising reductions from the price charged only a few months before, and that the paperer is glad of work in the slack season. A better job may be expected in the repair of stoves and furnaces in the spring than just as cold weather is setting in. Many other ways of taking advantage of seasonal occupations will occur to the thoughtful housewife.

HOW TO DISINFECT ROOMS, FURNITURE AND CLOTHING¹

For the benefit of those who have to disinfect after contagious diseases, details of the method being recommended by Boards of Health are here given. The help of an expert is not needed.

The windows, doors (with the exception of the one which is to give exit to the operator), registers, openings into chimneys, keyholes, and all other apertures through which air can pass should be sealed. In other words, the rooms should be made as nearly air-tight as possible. Gummed paper, put up in rolls, is made for this particular purpose. In lieu of it, however, common newspaper, cut into narrow strips and thoroughly wet, may be used, as it will remain in position long enough for the purpose. The paper used for sealing cracks, whether gummed or not, should be wet with a two per cent solution of formaldehyde, in order to disinfect the surfaces upon which it is to be pasted.

All surfaces should be exposed as much as possible; closet doors opened and their contents, together with the contents of drawers, removed, scattered about, and the drawers left open; mattresses set on end, pillows, bedding, clothing, etc., suspended from lines stretched across the room or spread out on chairs or other objects so as to expose all sides; books opened and the leaves spread—in short, the room and its contents so disposed as to secure free access of the gas to all parts

¹ Food Department, *North Dakota Agr. Expt. Sta. Special Bul.* 3 (1914), no. 12, pp. 209, 210.

as fully as possible. Upon this preparation largely depends the thoroughness of the disinfection.

The amount of cubic space to be disinfected should be calculated. For each 1,000 cubic feet of space, use six and one-half ounces of permanganate of potash and one pint of formaldehyde.

One large, flaring pail is the only apparatus needed. The pail should not hold less than ten or twelve quarts, and under it should be placed a few newspapers or a piece of old carpet, so that in case it should overflow or spatter during the intensely rapid effervescence which takes place, the floor may be protected. A wooden or indurated fiber pail is better for the purpose than one made of metal, as it better retains the heat which is evolved and which is essential to the best results.

When all is in readiness, place the permanganate of potash in the pail, then pour the formaldehyde upon it. The operator will be obliged to leave the room instantly on account of the rapid formation of gas. The premises should remain closed for not less than five hours; a longer time would be better. The temperature of the rooms to be disinfected should not be less than 60°F.

Remember that the formaldehyde solution must be poured upon the permanganate of potash, and never the reverse.

WHAT BED SPRINGS ARE THE BEST?¹

HARRIETTE T. RICHARDSON

The modern spring was made possible through the development of steel. Cords and wooden slats provided a support for the mattress of the olden time but with the malleable steel wire the spring came into existence. In the simplest form it is seen wrought out of center disks into which four even steel wires are linked making a square four inches in size. This steel net is suspended by helixes—that is coils of steel at the head and foot of the frame. This taut suspension prevents sagging under the weight of the body.

The woven wire spring is attached to the steel frame directly without the use of helixes. It is in reality a steel hammock, and it provides for an even distribution of weight; nevertheless, it will sag.

¹ Part of a study of mattresses and bed springs, made at Teachers College.

If side support is required a steel rod is at times used. But this rod once bent never returns to place. In certain woven mattresses the edge is rolled from the steel spring itself and by this means a side support is secured. The cost of the steel woven springs varies from \$3.75 to \$10.

The box spring is made upon another design. This spring is built upon a wooden frame which rests fast upon a wooden bed and is rabbited under for the same position on the iron bed. Upon this frame are fastened coils of tempered steel knotted at the ends and shaped in the form of an hour glass. These are covered with burlap and fastened. Over the burlap are placed layers of cotton felt, hair or lamb's wool and a tick which is tufted exactly in the same fashion as the mattress; a tick covers the frame, at the sides and on the under part as well. These box springs are further protected around the edges beneath the tick by a bamboo rim or in certain makes by a tempered steel rod. If the steel is once bent the fault may not be remedied easily while the bamboo will spring back to place and is never permanently bent. The height of spring is determined by the purchaser.

The cost of the box spring varies with the top filling. It may be bought with no hair, or untufted, for \$10, but when upholstered the cost is \$27 to \$28, and it will be noted that the sizes differ one dollar only in price. The cost lies in the workmanship.

The box spring is a better investment than the woven wire.

FOOD FOR SCHOOL BOYS AND GIRLS¹

A Day's Food Plan. Age 14-18 Years²

BREAKFAST—500-800 calories	Calories
Fruit.....	50-100
Cereal.....	100-150
Milk.....	100-200
Bread and butter.....	150-300

¹ Extracts from *Food for School Boys and Girls*. By Mary Swartz Rose. New York: Teachers College, *Technical Education Bul.* 23, pp. 15.

² For amounts required, see January JOURNAL, pp. 38-40.

For children under 14 years, see April (1914) JOURNAL, pp. 179-181 and June (1914) JOURNAL, pp. 286-288.

LUNCHEON—600–1200 calories

Macaroni and cheese, <i>or</i> hot roast beef sandwich, <i>or</i> bean soup and crackers.....	200–300
Cocoa <i>or</i> milk.....	100–150
Bread and butter.....	200–500
Baked custard, <i>or</i> rice pudding, <i>or</i> baked apple.....	150–200

DINNER—800–1400 calories

Meat, <i>or</i> bean or lentil loaf and potatoes, <i>or</i> scalloped eggs.....	200–300
Green vegetables, cooked.....	25–100
Fresh fruit <i>or</i> vegetable salad.....	100–150
Bread and butter.....	200–600
Ice cream, <i>or</i> tapioca cream, <i>or</i> charlotte russe.....	150–200
Milk <i>or</i> cereal café au lait.....	100–200
Total.....	1800–3200

Most aversions to food are formed during or before the period of adolescence. These are deplorable socially and economically, and may be the cause of a badly selected diet. They arise through unpleasant associations, as sickness or accidents; through imitation of others, especially admired adults; through unpleasant suggestions made by others; or through idiosyncracies of taste. An enthusiasm for nourishing food needs to be cultivated among children by precept and example, and worthy foods should be kept from falling into disrepute by every legitimate means. The cultivation of a rational appetite will help immensely in laying the foundations of health for later years. Many of the results of dietetic indiscretions are not apparent immediately, and their seriousness is apt to be underestimated. Fuller physical development, greater resistance to disease, freedom from fatigue, increased mental alertness are hard to measure in concrete terms. But psychologists and physiologists are perfecting tests, and these, even in their present crude state, give abundant evidence of the value of food in promoting health. And while we are right in insisting upon economy in the use of food materials, it must be a rational economy which avoids waste but recognizes the necessity of an ample food supply, rich in building material, not only through elementary school and high school, but even through college. Many a young man and woman has, by subsistence on meagre and unsuitable food during the college years, paid the penalty of lowered resistance at a later period. If rigid economy must be practiced, let it be on the seasoned adult who can best bear it, and not upon developing young people, whose right it is not only to be well born but also well reared.

HOUSEKEEPING A GAME

Let the young men and women who make new homes look upon housekeeping as a game requiring consummate skill and affording much enjoyment to those who play it for themselves.

"Housekeeping a game?" Well, why not? What are some of the elements that make games enjoyable? The charm of uncertainty, of the unforeseen turn which brings victory, and the opportunity to show personal skill or prowess. Are not these present in the everyday routine of the new housekeeping? Probably it is the secretly recognized lack of skill or power to win the game that makes household processes so distasteful to many women. Strange that any woman will undertake the management of a home without some preparation in the arts involved.

WORK FOR ODD HOURS

Nothing is more called for, nothing more urgently needed than a list of money-earning occupations for odd hours in the home.

In default of this list the housekeeper can without doubt earn, or she may call it save, best by doing her own sewing, washing and baking, that is, if she must be at home caring for young children and preparing the meals—or she may choose of the three that for which she has most inclination or talent. On the other hand, the housekeeper who follows a regular vocation outside the home will buy ready made garments and patronize the laundry and the bakery.

But in any case when the garments require re-modeling, or the choicer laces and muslins will not bear the hard treatment of the laundry, then the home manufacturer may save more than she could earn in the same hours elsewhere. For the making over of garments it is desirable that one should know their defects and the conditions under which they are to be used in the future. Therefore, the home dressmaker with even a limited knowledge of the art often secures better results than the skilled seamstress. Material of good quality, made over at home will do better service, usually, than an inferior grade of ready made clothing. In combining two half-worn garments into one new one there may be found a fascination, not exceeded by a jig saw puzzle, or a game of cards.

A NEW USE FOR GRAPEFRUIT

A correspondent in the South suggests that in localities where grapefruit is cheap the juice might be used as a substitute for sour milk in making waffles, griddle cakes, muffins, biscuits, cakes, etc. The acid equivalent of a cup of sour milk would be furnished by two-thirds of a cup of juice. The remaining one-third of a cup of liquid is made up by adding water.

Some who have tried this substitute think the advantage lies chiefly in the added flavor, while others suggest that an objectionable acid flavor is noticeable.

IMPORTANCE OF RETAINING MINERAL MATTER IN CANNING VEGETABLES

The Journal has frequently called attention to the dietetic value now attached to minute quantities of mineral matter found in fresh vegetables and fruits, and also to the fact that these are to some extent soluble in hot water and thus liable to loss if the water in which they are cooked is thrown away.

As might be expected, it has been found that the mineral matter in certain canned vegetables is much less than that in corresponding fresh ones. For further details see page 72.

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BOOKS AND LITERATURE

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Principles of Cooking. By EMMA CONLEY. New York: American Book Company, 1914, p. 206. \$0.52. By mail of the Journal, \$0.60.

As a basic text-book for teachers and pupils in upper elementary and secondary schools "Principles of Cooking" finds a deserved place among many recent publications in the household arts field.

Prominent among the distinguishing features of the book are (1) the broad view-point established through the suggestive references to the economic and industrial phases of the subject of foods, (2) the logically systematized sequence of principles of cooking, with a thorough comparative summary, (3) the application of principles in well selected basic recipes, with suggestions for adaptation and variation, (4) the detailed discussion of food stuffs, (5) the balance between the practical phases and the essential scientific principles involved, (6) the chapter devoted to the teaching of cooking in rural schools, (7) the selection of essential details in the teaching of simple table service.

Miss Conley has enriched the pages of her book with many valuable illustrations, and a well-organized index renders it very usable as a reference as well as a text-book.

Studies in Carbohydrates; the Composition and Digestibility of Wheat Bread and Allied Foods [and] Gelatinization of Starches. By C. H. LAWALL AND SARA S. GRAVES. (Trans. Wagner Free Inst. Sci. Phila., 7, 1913, pt. 2, pp. 35-45.)

The results are reported of the microscopic examination of 12 starches, raw and also cooked below and at the temperature of boiling water, including starches from cereals, potato, sweet potato, maranta, and bean and pea. In the cooked starches, "it was noticed that the absorption of water begins at the hilum, working toward the edge until the granules burst or collapse."

Similar studies were made of the starch of white bread, commercial rye, graham, and gluten bread, rolls and crackers, pretzels, and matzoth, and of the starch in cooked vegetables, including beans, peas, and lentils, boiled until soft, baked beans, string beans, and canned French peas (petits pois). With the vegetables, "in every case the starch granules were found to be entirely gelatinized, either swollen or broken."

Determinations of the gelatinization points of free starches from cereals, potato, sweet potato, maranta, bean, pea, and lentil were also made. "Noting the gelatinization points of raw and dried potato starch, and the diverse results in the pea and bean experiments, it is evident that the form of the starch and size of the particles have marked influence. It is possible that the time required to heat to the desired point may affect the result. The greatest difficulty, however, lies in determining the point at which the majority of the granules may be called gelatinized. It is not definite within 1 to 3°.

"The microscopic examination of starch, both raw and after cooking, has shown that in process of bread making it undergoes a marked change which has a direct effect on the composition and value of the bread produced. From 5 to 8 per cent of the insoluble starch is changed to a soluble form, and very many grains are ruptured and rendered more susceptible to the action of solvents, such as the digestive fluids, by combined action of heat and ferments. The 35 to 40 per cent of water prevents the temperature in the interior of the loaf from rising much above 100°, thus accounting for the small amount of soluble starch in comparison with the 10 to 18 per cent in bread crust and 5 to 12 per cent in crackers."

Food Analyses and Other Pure Food and Drug Topics. [Examination of Textiles.] By E. F. LADD AND ALMA K. JOHNSON. (North Dakota Sta. Spec. Bul., 2, 1913, No. 21, pp. 357-368.)

Some data are given regarding the relative cost of a meal in hotels and restaurants of different grade and the relation of fancy marketing of food products to the cost of living. Some pure food and drug topics are discussed and data are given regarding the examination of miscellaneous foods and beverages.

A sample of cloth said to have been purchased as "all wool" flannel was examined and found to contain approximately $\frac{2}{3}$ cotton and $\frac{1}{3}$ wool. "This is characteristic of a good share of the material sold as 'all wool' or 'commercial wool.'" It is stated that samples of so-called "woolen cloak goods," which one of the authors saw made in the factory where the samples were procured, consisted of cotton, 10 per cent, Australian wool, 10 per cent, and shoddy, 80 per cent.

"That this material might be called 'commercial wool' is true, but the statement that it contains enough of cotton, about 10 per cent, to make it wear better, when, as a matter of fact, the truth is that it contains 10 per cent of cotton to hold the shoddy together, 80 per cent of ground-up rags, and 10 per cent of real wool. The ground-up rags may be all wool, but they are not what is understood as such when purchasing all wool goods,

nor are they of the same value. At the present time when one buys the product called 'commercial woolen goods,' he may be getting an article that contains a small amount of cotton and the rest straight wool, but he is more apt to be getting a considerable proportion of cotton, a small amount of true wool, and the balance shoddy or ground-up rags."

The need for a textile law is urged.

Pure Food and Sanitation. Papers at the Seventeenth Annual Convention of the Association of American Dairy, Food and Drug Officials. (Proc. Assoc. Amer. Dairy, Food and Drug Officials, xvii, 1913, pp. 165, figs. 2.)

In addition to officers' reports and similar material, papers on a variety of pure food and related topics are included. Among others are the following: Supervision of the wholesomeness of materials, by E. F. Ladd; to what extent should the functions of a State food department be regarded as educational, by L. P. Brown; the fat standard as a substitute for the water standard for butter, by W. C. Frear; net weights and measures laws, by A. H. Jones; what should be the attitude of food officials toward the supervision of sanitary conditions in hotels, restaurants, dining cars, and eleemosynary institutions, by G. L. Flanders; what attitude toward the supervision of sanitary conditions in restaurants, hotels, etc., by C. D. Woods; sanitary food law and the use of the score cards in sanitary inspection of food establishments, by H. E. Barnard; the score card system of food inspection, by G. B. Taylor; the analysis of a sample of sugar vinegar made from cane sugar, by W. H. Harrison; an apparatus for the rapid determination of available carbon dioxide in baking powder, by B. Harrison; and the water content of oysters, by F. L. Shannon.

Markets for the People. By J. W. SULLIVAN. New York: The Macmillan Company, 1913, pp. 316. \$1.25. By mail of the Journal, \$1.35.

A well-considered plea for the despised pushcart as a means of reducing the cost of living by lowering the price of food. As such it merits the serious consideration of students of Home Economics. These students need not the figures presented here to convince them that the item "food" is the largest in the average household budget, often constituting between 45 and 60 per cent of the total family expenditure. Well-stocked provision stores dealing in all kinds of foods are, according to the author, a convenience to the rich and to the well-to-do. Permanent municipal markets are liable to benefit chiefly the commission merchant and the middleman in general. Hope for the poor, however, lies in the provision section of the department store as a source of staple goods and in the ambulant push-

cart vender who, in the opinion of the author, should be provided with a place in the public park or other open space where at popular marketing times (Saturday evenings, for example) he can cease from ambulating and give his exclusive attention to his patrons. "Working-class London in general, and much of middle-class London as well, buy the bulk of their perishable necessities from ambulant pushcart vendors or at open-air markets. The system is at once the most ancient and the most modern. It is the cheapest of all systems—efficient, natural, democratic, rightfully communistic. It often gives the masses double rations."

The book contains a chapter on coöperative buying and much other material which bears more or less directly on the problem of how "the successive barriers that clog the flow of foodstuffs from the country producer to the city consumer" can be broken down; its chief claim to distinction, among the host of books on the same subject, lies in the unique character of the remedy which it advocates and in the facts which it assembles in support of its plea.

How We Serve Hawaiian Canned Pineapple. (Honolulu, 1914, 2 ed., pp. 24, figs. 29.)

This pamphlet, issued by the Hawaiian Pineapple Packers' Association, contains numerous recipes for serving canned pineapple in a great variety of ways. The recipes are contributed by fifteen well-known cooking experts.

Making Built-In Furniture. By ABBOT MCCLURE. New York: McBride, Nast and Company, 1914, pp. 52. \$0.50. By mail of the Journal, \$0.55.

The latest of the House and Garden Making Books is the one on Making Built-in Furniture. It includes a number of sensible suggestions for artistic, convenient and permanent additions to the house in the way of furniture for storage purposes, such as bookcases, drawers, closets, cupboards, side boards, dressers, etc., and of furniture for personal or bodily accommodation, such as settles, benches and desks.

Usefulness, appropriateness and beauty are insisted upon. No attempt is made to give directions for making such furniture, but the drawings and photographs as well as the text are suggestive and illuminating.

NEWS FROM THE FIELD

New England Home Economics Association. On Thursday afternoon, December 3, the New England Home Economics Association held its opening meeting in an informal "At Home" in its new headquarters, 4 Joy Street, Boston. Mrs. Eva W. White, the president, told of the plans for weekly round table conferences, beginning January 4. The first Monday of each month is to be for the Social Workers and Nurses, the second Monday for the Domestic Science Teachers, the third Monday for the Homemakers, and on the fourth Monday we plan to have an open meeting with speakers on cooperative buying.

It is hoped that friends from all over New England will bring their problems to the round table for discussion. These discussions will be led by persons prominently connected with the special lines of work. At these meetings notice will be given of other meetings or lectures on Home Economics in or around Boston.

The Home Economics Association of Philadelphia. The classes planned by the Home Economics Association are successfully under way. Great interest is being shown in the class in dietetics, with laboratory work, which is being given at Drexel Institute by Miss Hannah Hill.

Between fifty and sixty people have joined the class on "The Budget," conducted by Miss Emma Winslow of Teacher's College. The following is the outline of the course as Miss Winslow expects to give it:

- I The history of the budget: The budget as it has been used by governments, by business and social organizations, etc.; the increasing realization of its importance as an instrument of financial control.
- II The budget of the household: The budget plan as used in the household; the budget standards as set by various investigators of household expenditures.
- III Household accounts and the budget: Methods of keeping household accounts; methods of using budget standards in controlling expenditures.
- IV The expenditure for housing: The importance of good housing as a basis for normal, healthy family life; the economic and social factors which influence the amount to be legitimately spent for housing.

- V The expenditure for clothing: The importance of the wise selection of clothing if the family are to be adequately clothed with a not too large expenditure of money; discussion of the various suggested lists of clothing where the minimum expenditure is a necessity; the additional items which are necessary.
- VI Food expenditures: The minimum standards that have been set by various investigators; the range of variety possible in low cost dietaries; the need for education in the selection of the right kind of food, and in its purchase in such a way that minimum prices are paid.
- VII The operating expenses: The housewife's time, or her money for labor-saving devices or a servant's wage; how low is it fair for the operating expenses to be kept?
- VIII Savings and the "higher life;" After the necessities of living are provided, what?
- IX Discussion of budgets collected by class.
- X Discussion: Is a budget worth while?

Ohio Home Economics Association. The fifth annual meeting of the Ohio Chapter of the Home Economics Association was held in Cleveland, Ohio, on October 22, 23, 24, 1914, in conjunction with the North-Eastern Ohio Teacher's Association. The afternoon of the 22d, and the morning of the 23d were devoted to school-visiting.

The program of Friday afternoon was devoted to the art phase of our work. Miss Adelaide Van Duzer, supervisor of Household Arts in the Cleveland schools spoke on the Use of the Model Apartment in teaching Household Arts. Miss Agnes B. Slaymaker of the Interior Decoration Department of one of Cleveland's most exclusive shops, The Halle Brothers Company, spoke on Art in Textiles, illustrating her talk with simple and inexpensive as well as very costly fabrics. Miss Jean Garrabrant of West Technical High School, presented Art in Dress, giving illustrations through line sketches of good and bad taste in clothes. Mr. A. D. Kennedy of East Technical High School spoke on Art in House Furnishings, and he used fabrics, paper, furniture and wood finishes to illustrate color schemes for various rooms.

The Saturday morning meeting was held in the rooms of the Household Administration Department, Western Reserve University. Miss Mary E. Parker, head of that Department gave her impressions of the June meeting of the American Home Economics Association. Miss Florence M. La Ganke, Western Reserve University, talked on the Relation of the School-Lunch to the Pupils' Health, and told of work being done in other cities. She laid especial emphasis on Cleveland School-feeding which is

financed and managed largely by the Federated Woman's Clubs. Miss Cecelia A. Evan's topic was Homemaking as seen by a Visiting Nurse. She put in a plea for the teaching of Homemaking—especially Marketing and Costs and Table Service—to boys. The last speaker was Prof. C. C. Arbuthnot of Western Reserve University, who chose Marketing in Theory. The subject dealt with economic and social phases of the problem.

Miss Marcella Macke of Dayton is compiling a State directory of Home Economics teachers.

Home Economics Day. The California State Normal School of Manual Arts and Home Economics Branch of the American Home Economics Association kept Memorial Day for Mrs. Richards by having a very dignified but delightful program at the close of the day on December 3. The program consisted of music, and addresses on phases of Mrs. Richards' work, personal recollections of Mrs. Richards, and the Memorial Fund.

The lecture room was very tastefully decorated and Mrs. Richards' fondness for flowers and her idea that a row of flowers or potted plants could be used instead of a curtain in front of windows, especially of dining-room windows, was called to our attention by palm branches before the windows in the school. No celebration in honor of Mrs. Richards is complete without at least a small exhibit, for Mrs. Richards believed so deeply in the value of exhibits as a means of educating public opinion. And hence a small exhibit of personal letters, Mrs. Richards' books and the Memorial numbers of the JOURNAL were arranged and the walls were decorated with some of the best mottoes from Mrs. Richards' writings selected by the students in Home Economics.

Mrs. Richards' personal letter to Miss Stewart giving her reasons for the use of the word Euthenics was of special interest.

"My dear Miss Stewart:—No, indeed, 'Euthenics' is to be used only for a *college* course on the lines of sociology or social economy. I do not mean cooking or millinery but a broad study of conditions leading to a better practice. It is the ethics of scientific living. * * * * Dr. Robins at the meeting at which eugenics was discussed said that he believed that food was the greatest of all factors in the development of the child. I searched the Greek dictionary for a word which should mean improvement through environment rather than heredity—of those I selected and submitted to Dr. Gildersleeve of Johns Hopkins he thought *Euthenia* came nearer and so I started the term Euthenics. * * * I do think Euthenics a very good word to signify race betterment through existing possibilities which are under our control and that the fact that they are under our control is the most important one to teach.

* * * (signed) ELLEN H. RICHARDS."

Mrs. Richards' interest in Santa Barbara and the growth of Miss Rich's work here was always very keen. President Rich gave tribute to the debt which we owe to Mrs. Richards for her wise advice, helpful counsel and personal interest in the early growth of the work in Home Economics in California begun by Miss Rich first in the Public Schools and later in the special normal school of Manual Arts and Home Economics which because of its high standards and thorough work was shown much appreciation by Mrs. Richards.

North Dakota Agricultural College. Recently the national chapter of Phi Upsilon Omicron Fraternity installed the Beta Chapter in this college. Graduates of Home Economics courses leading to the degree, or college women who are interested in some line of investigation or some educational work, are eligible to membership in this fraternity. Its aim is to advance Home Economics. The chapter is planning a program for Home Economics Day and hopes to contribute to the Memorial Fund.

Last year the fraternity house of the Minnesota chapter was turned over to the Home Economics Division for an experiment in carrying out a self-supporting home management course. The data thus obtained furnished a basis warranting the Division in securing a larger house for this year and establishing the course as a permanent requirement in the curriculum. Further details are given in the following news item.

University Farm, St. Paul, Minn. The Home Economics Department has rented a large house for a practical course in home management. It was at first an optional course but proved to be of such value during the semester it was tried that it is now required of all seniors for graduation. Twenty girls live in the house, eleven of whom are permanent boarders, and the other nine are seniors who are required to stay at the house for nine weeks, doing all the work for that time.

Miss Josephine T. Berry, head of the Home Economics Department, is primarily responsible for the organization but it is under the direct supervision of Miss Grace Williams.

The house manager has by far the most difficult work. She must plan the menu for the week and is responsible for everything that is done during her time of management. She is allowed thirty cents a day for each person for food, that is, raw material. The boarders are unanimous in declaring the fare excellent for a boarding house.

The regular boarders, who are made up of college girls and members of the Home Economics faculty, pay \$25 a month, while the workers pay \$20.

There are fifteen rooms, five on each floor. This gives ten bedrooms to accommodate twenty girls. Eight of the girls sleep on a large porch.

Extension Work in Massachusetts. A free course of lectures and demonstration on Home Economics is being offered to interested people in the State of Massachusetts. The purposes of this free course as outlined in the folders are: to present to as many women in the state as possible information on subjects pertaining to homemaking; to arouse interest throughout the state in a state-wide campaign of education on the subject of Home Economics; to secure the introduction of these subjects into the schools, especially those of small villages and rural districts, and the employment of trained teachers for the carrying on of the work.

The organizations coöperating in this campaign are: the Massachusetts State grange, the Home Economics section of the Massachusetts Federation of Women's Clubs, the New England Home Economics Association and the Extension Service of the Massachusetts Agricultural College. Six towns have signified their desire for these lectures and demonstrations to be given.

Home Economics Section of the Central Association of Science and Mathematics Teachers. This section met for the first time on Friday, November 27, at Hyde Park High School, Chicago. About two hundred teachers and students of Home Economics were present.

Short papers were read, as follows: Household Management Course in High School, Bernice Allen, High School Department, School of Education, University of Chicago; Teaching Food Work through Preparation of Meals, Agnes Wilson, Housekeeping Center, Stockyards District, Chicago; House Decoration Course in High School, Isabel Clark, Beach Manual Training School, Oshkosh, Wis.; High School Dietetics, Ada Hillier, South Bend High School, Ind. At the close of the discussion following these papers, the section voted to instruct the chairman to appoint a committee on nomenclature to take up the question of terminology to be used and corresponding content of subject matter, in naming high school courses, with a view toward securing greater uniformity in that respect. This committee was appointed as follows: Miss Van Hoesen of Chicago University, chairman; Miss Clark of Oshkosh, Miss Firth of Davenport, Ia., Miss Latta of Columbus, Ind., and Miss Green of De Kalb, Ill.

Mrs. Sabin of Lucy Flower Technical High School, Chicago, answered many questions which followed her paper describing the work of the lunch-room class of which she is the teacher. Miss Grace Hood, director domestic science and in charge of institutional work at Lewis Institute, Chicago, then gave a paper in which she discussed the opportunities for, limitations of, and necessary conditions for institutional courses in high schools. Miss Julia Tear of Hyde Park High School gave a talk on Textile Testing for High School Girls; and was followed by Miss Agnes Hanna of the University of Chicago, on Drafting of Dress Patterns—the values secured

by teaching drafting, the extent to which the girl will be likely to utilize such instruction in after life, etc.

At the Saturday morning meeting new officers were elected for the 1915 meeting: Miss Agnes Hanna, University of Chicago, chairman; Miss Emma Conley, vice-chairman; Miss Minna C. Denton, Ohio State University, secretary. The speakers were Mrs. W. S. Hefferan, vice-president and chairman, Parent-Teacher Committee of National Congress of Mothers of the National Education Association, who spoke on Attitude of the Home toward School Home Economics, and who urged teachers to educate girls to simpler standards of living; Miss Grace Schermerhorn, Iowa State College, Miss Abby Marlatt, University of Wisconsin, and Miss Emma Conley, Wisconsin supervisor of domestic science, who gave an account of various methods used by Home Economics teachers in different parts of the country, to secure coöperation with the home, to encourage home work by pupils, and even to give school credit for this home work. Miss Louise Stanley of the University of Missouri told of Home Project work in Southern High Schools as she has seen it in a recent visit. That these topics were of great interest to the audience, was manifested by the disposition shown to ask questions whenever opportunity occurred.

Some further addresses of interest to Home Economics teachers were the Place of Home Economics in Secondary Education, by Miss Van Rensselaer of Cornell University, given at a general meeting of all sections on Friday morning; What Chemistry Should a Girl Have Who Expects to Teach Domestic Science? by Professor Ashman of Bradley Polytechnic, Peoria, Ill., given before the chemistry section; Methods of Connecting the Teaching of Physics with Phenomena Observed Outside the School.

A moving picture exhibit and lecture were given Saturday afternoon at the First National Bank Building, showing manufacturing processes for various silk and cotton textiles, to an audience of forty teachers.

Standardization of Home Economics Courses. The following resolutions were submitted by the Committee on Education of the District of Columbia Federation of Women's Clubs October 31, 1914:

Whereas, The value of Home Economics study has become generally recognized, and

Whereas, Investigation shows that Home Economics courses are not sufficiently standardized to be counted as college entrance credits by many of our colleges and universities,

Be it Resolved, That the District of Columbia Federation of Women's Clubs use every effort to secure the standardization of the course in Home Economics as taught in our schools.

FRANCES G. FRENCH, *Chairman*,

ELLEN MARSHALL RUGG, *Vice-Chairman*.

THE Journal of Home Economics

For those interested in Homemaking
Institution Management, and Educational Work in Home Economics

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Vol. VII

MARCH, 1915

No. 3

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STATION N, BALTIMORE, MD.

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Lake Placid Club

Lakeside, oldest of the four clubhouses

THE Journal of Home Economics

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FOREWORD

SARAH LOUISE ARNOLD

Dean of Simmons College, Boston, Mass.

In this number the JOURNAL OF HOME ECONOMICS presents a report of the proceedings of that section of the American Home Economics Association that gives specific attention to the administration of institutions.

A word of introduction may be needed for readers who have been accustomed to think in terms of the private home when discussing the subject called Home Economics. As society is constituted today, the private home does not suffice the triple needs of humanity: food, clothing, and shelter. Thousands of children spend their early years in homes provided by the state or by philanthropy—homes more or less public and often far removed from the ideal. All of us are glad to take shelter in the warm room of the modern hotel. Many of us have profited by the home attached to the school or the college in which we were educated. Communities are obliged to establish homes for the sick, for the unfortunate, for the criminal, and for the defective.

The institution becomes then a matter of common interest. If the public has not learned to measure the needs of the institution, is it not time that this should be done? If society must provide food, clothing, and shelter for orphaned children, for the poor, for the defective, for the wayward or the criminal, is it not incumbent upon the intelligent members of society to understand the type of institution that can best be adjusted to the needs of these various groups?

The general reader, therefore, is urged to reflect on the subject matter offered here, noting that the work of the institution is not

far removed from the work of the private home, and recognizing that the community will profit by a clearer understanding of the problems that the Institution Section of the American Home Economics Association is trying to solve.

Many readers may be interested to know that the Institution Section is really the parent of the American Home Economics Association, as well as its daughter, the Lake Placid Conference being the beginning of the American Home Economics Association. At present a large and important group of the members of the association are endeavoring to secure better living conditions in institutions. The members of this group are studying all the problems of nutrition, sanitation, and expenditure, from the point of view of the institution. They are anxious to learn how the home for the many can be made wholesome, comfortable, serviceable, economical, and reliable.

Several schools and colleges are attempting to provide courses of instruction in institution economics. Notable examples of this attempt may be found at Teachers College in New York, Simmons College in Boston, Mechanics Institute in Rochester, New York, Pratt Institute in Brooklyn, Chicago University, and Cornell University. For the classes no text-books can be found except such as have been compiled by the Institution Section. For the time being, therefore, the reports of the proceedings of this section have a very definite value. As the years go on, as the material is properly assorted and tested, and as our experience increases, formal texts and formidable volumes will take the place of these simple records. Until that time, all students of institutional problems will do well to secure the records of the annual meetings of the Institution Section.

On another page of this issue appears a list of the reports and JOURNALS containing papers that have been presented at earlier meetings. The reader will also find the announcement of the 1915 meeting of the section, which will be held once more at the Lake Placid Club, at the invitation of Mr. and Mrs. Dewey.

We heartily urge all who are interested in the problems of the larger housekeeping to attend the meeting. No one ever enjoys the privilege of one of the Lake Placid meetings without promising himself a repetition of the pleasure.

ADDRESS OF WELCOME

GODFREY DEWEY

Secretary, Lake Placid Club

It is a great pleasure to welcome you here at this time. There are many present who have been here in other years, and to whom the Lake Placid Club is an old and familiar story; but there are many others here to whom this is the first glimpse of Lake Placid and the club, and to whom a word of introduction and explanation of the aims of the club may not be amiss.

The idea of the club was born long before the physical plant took shape, or substance, or even name. Its birth was brought about by the realization that the increasing pressure of American life was making it essential for the world's best workers to get the greatest possible amount of life, strength, comfort, and recreation, out of their annual or occasional vacations. After years of search for the right place in which to develop the idea of the club, Lake Placid was selected in 1893 as the spot on the American continent best suited for working out the plans of the founders.

We have come far from the first year of the organization of the club in 1895. At that time there were only thirty persons on five acres of land, and they were housed in one building, which has now been lost in the heart of this Lakeside Club House. In August last year there were nine hundred guests here at one time; and it is a far cry from the evening when the club council sat in grave deliberation over the wisdom of installing a second bathtub for the plant, and decided against it as an unjustified extravagance, to to-day when there are over three hundred bathrooms on the premises.

To-day the plant comprises something over six thousand acres, stretching for a distance of perhaps ten miles. It comprises over two hundred and sixty buildings, large and small; twenty-seven farms in five or six groups; shops; mills; and accessory departments of every description. The plant has grown to be almost a little self-contained world, not from the choice or the desire of the founders for expansion, but from necessity caused by the growth of the club.

The business organization of the club is called the Lake Placid Company. It is a New York stock corporation with \$100,000 worth of controlling common stock in the hands of trustees, with bonded

indebtedness to the amount of \$500,000, and with \$500,000 worth of preferred stock scattered among the members of the club. The company is the legal organization. It assumes all liability and owns and operates the plant for the club members. All the departments with which the members come in contact, except the department in charge of rooms, are administered by departmental heads who are pledged to spend the total receipts in making their departments the best possible according to their ability. The company takes the room rental, and with that money operates and adds to the entire estate. All the departments, with this one exception, are placed on a coöperative basis, but without the individual liability that coöperation so often implies. No club member, as such, is liable for anything but the bills that he himself incurs.

The social organization is represented by the club council, which is elected annually by and from the club members. To this council are referred questions of membership, house rules of the club, and like matters. The members of this council, however, have no legal responsibility other than that for their personal expenses.

What are the aims of this organization? The first aim is best expressed in the opening sentence of the general circular of the club. It is as follows:

The object of Lake Placid Club is by coöperation to secure among congenial people and beautiful natural surroundings the advantages of an ideal vacation or permanent country home, the highest standards of health, comfort, rest, and attractive recreations, both summer and winter, at as moderate cost as is consistent with high standards.

The next aim is to work out the best standards for health and comfort, to make of this plant a great experimental laboratory for the working out of these standards, and to share the results freely with others who are interested. Besides the aim to make of this a laboratory or an experiment station, there is a desire to make it a training school from which persons may go out to spread the standards learned here and to guide other persons in their work. It is a hope of the club to make this a center for conferences of workers who need an ideal meeting place in order to obtain the best results.

WASTE

MARY URI WATSON

MacDonald Institute, Guelph, Ontario

The committee on waste decided to limit its work this year to the question of food waste. A questionnaire concerning this subject was sent out to members of the association, and a brief summary of the answers to these questions follows:

The first question was: "Does your institution use any means other than garbage inspection to control or prevent the waste of food?" The most important factors in the control of waste, according to the answers, are the interest and the everlasting vigilance of the manager of the institution and his or her power to interest subordinates in the subject. The work of controlling food waste may be delegated to subordinates, but it will not be effective if keen interest in it does not emanate from the manager, and if he or she is not in sympathy with the work. There are various methods of controlling food waste given in these answers. Close calculation of supplies needed was emphasized by many. The planning of menus and the calculation of precise quantities to exactly serve the required number of portions was another method. Careful buying was emphasized. Another method was careful calculation of quantities so that only the food necessary for each meal should be cooked. Another method of obtaining the same result was by using a system of requisitions for all supplies furnished to the kitchen and the other departments. In some cases, daily inventories of refrigerators and storerooms were made before the requisitions for the next day were made out. In one institution the portions of food were measured. In most of the answers the constant watch of the plates was mentioned. Unpopular dishes, careless preparation and wasteful service are discovered in this way. A certain dish may be unpopular because of lack of seasoning, or it may have other objectionable features. In some institutions unserved foods that may have been sent to the dining rooms or other serving rooms for individual or family service are carefully collected so that they may not be spoiled for later use. In one institution the served dishes are collected on one central table and the chef decides which can be used and which have to be put out. Another method of controlling waste is by a thorough inspection of the refuse collected from serving

dishes and from plates. Another method used which has apparently been well tested in one or two places, is the written daily report of garbage or waste inspection. In one answer attention is called to the employing of competent skilled labor as a means of controlling waste, and in another to the need for departmental heads who are able to train subordinates to the needs of the particular institution.

The next question was: "What use is made of left-over bread, cake, butter and the like?" There was great uniformity about the answers. Most of the left-over bread, cake, and so forth, is used. Usually left-overs are used in the preparation of meals. Occasionally institutions sell left-overs, and occasionally they give them to homes or charitable institutions. Sometimes garbage is given to any company that will pay for the cost of transportation. Occasionally a bargain is made by which grease and bones are sold by the pound and by which the company buying them agrees to remove garbage. The agricultural colleges and institutions which have farms in connection with them are fortunate in that they may transform all their waste into live stock or poultry. This, in some cases, adds revenue to the institution.

The next question was: "Have special recipes for the use of left-overs been worked out in your institution? If so, can copies be obtained?" In the forty or more answers to the questionnaire, there were but four touching on this question. One or two recipes, which may be new to some, were given in the replies to this question, and others a few of which may be obtained, were mentioned. One matron reports that she is compiling a cook book of recipes for 500 portions.

The next question was: "Does your institution use printed or written directions to govern the collection or disposal of food waste or garbage?" There was a very curious lack of printed or written directions in the answers for this work. Only one person reports the use of typewritten directions for part of this work. One manager is now formulating such directions. Probably some of the lack is due to the fact that many institutions have to employ illiterate help for whom written directions would be useless. Here is a field wherein the members of the association may do some good work if they will coöperate. The training schools have already proved the value of printed directions for mechanical work. The use of written directions does not eliminate the necessity of using intelligence and judgment, but it does prevent misunderstandings with regard to processes of

handling. Our own institution has more than proved the value of printed instruction in the training of students.

The next question was: "What special arrangement does your institution make to facilitate the collection of left-overs and refuse, or its inspection and disposal?" One manager reports that it is one man's business to empty, wash, sterilize, and replace the garbage cans daily at a specified time; that is, one man is responsible for the state of the garbage receptacles. Another reports the use of special trucks with garbage cans underneath. Soiled dishes are collected, scraped and stacked on these trucks. It was not stated whether this truck is simply a scraping table on wheels with a rubber cover around the hole, over the garbage can, or whether it is simply an ordinary truck on wheels with a can underneath. A scraping table with a rubber cover around a hole over a garbage can and with room enough around that hole for the stacks of plates, would be very satisfactory for use in large institutions and in institutions where the service would permit the rolling of the trucks. Such tables might be used advantageously in institutions that give family service and in institutions where all the residents enter and leave the dining room at the same time. Another manager reports the collection of the serving dishes at a central table. Another reports the use of separate receptacles for the different left-overs of food, in order to prevent mixing them so that they cannot be used again. One reports the use of separate receptacles for different kinds of bread scraps, one for whole slices of bread that may be used for toasting or serving, another for loaf ends and crumbs from the cutting table, and a third for broken bits, which in this case went to the poultry department of the farm. Another manager reports the practice of keeping garbage cans in cold storage. In this institution garbage was evidently disposed of once a day, and in the interval garbage cans were kept in cold storage to prevent food souring in them, to keep them from flies, and also to prevent the development of objectionable odors both in the food and in the cans.

The next question was: "What kind of garbage receptacles do you have?" The almost unanimous answer is galvanized iron, that much abused metal. The receptacles vary in capacity from eight quarts to thirty gallons, according to their location and to the system of garbage collection. A few managers report the use of white enamel receptacles but these are chiefly in hospitals. Some report the use of covered cans and some open cans. This appears to be a question

for careful discussion, the use of the open can versus the closed can. Some persons object to using the closed can, especially when it is kept in warm kitchens because foods ferment rapidly in it and because waste is kept out of sight in this way. Several persons report the use of patented receptacles, barrels made by the Dover Stamping Company, the Just Right cans, and the DeWitt cans. One lunch room manager reports the use of wire baskets with solid metal bottoms for the collection of paper wrappers in school lunch rooms. In one institution the question of a garbage can with a strainer bottom, which will strain the liquids from the solids of the garbage is being considered. In another institution the garbage receptacle used is a galvanized tub with an elevated double bottom for draining the liquid off. The lower part of this tub has an outlet with a stopper similar to that of a beer bottle. Such stopper is comparatively easily cleaned.

The next question dealt with the frequency of inspection, and the answers range from "when necessary" through "casual" and "irregular" up to "after every meal." In the majority of cases, however, there is daily inspection though it does not seem to be so well organized as some of the other methods of controlling food waste. In one or two institutions it is very thoroughly organized. A thorough system of inspection very quickly permeates an institution and has its effect in lessening waste, for if employes know that careful check is kept in small matters of waste, greater care is taken to lessen waste. The moment the inspection relaxes, care is likely to relax. Therefore, the matter must be continually brought to the minds of the employes.

The final question on the paper was: "Does your institution use an incinerator?" The use of an incinerator is reported in eight answers. There is, however, little information given as to the cost of installing incinerators, the size of the institutions using them, and the amount of waste consumed in specified time. The fuels used are gas and coal. One person reports that the cost of fuel is negligible because it is only needed in starting the operating of the incinerator. After the incinerator is started, it practically runs itself, for the burning of the material supplies the heat necessary for drying the wet garbage. Another person reports that the incinerator used in his institution heats water at the same time that refuse is burned; therefore the cost of the incinerator is offset by the heating of the water. One or two report that the cost of using gas incinerators is about 50 cents per

hundred pounds of wet garbage. One person doubts the advantages of incinerators in small institutions because of the cost of operating them. In one institution, according to the report made, incinerators were tried and abandoned because of the high cost of operation and because of inability to regulate the water heating attachment.

DISCUSSION OF MISS WATSON'S PAPER

Miss Eckman, The Massachusetts General Hospital. In our hospital we have seventeen wards. Twice daily an assistant inspects the garbage from the wards, the serving room and the kitchen. Each ward is provided with a twenty-quart galvanized iron pail. The pail is numbered or lettered according to the ward, and in the morning an assistant inspects the garbage from breakfast of that morning to supper of the night before. In a basement set aside for this purpose the cans are arranged side by side on a shelf. In the morning, a man whose duty it is to collect this garbage comes with his truck containing a number of barrels and the inspector protected with an outer garment stands by as he slowly pours the contents of these pails into the barrels. He calls the number or name of the ward while she looks to see what is in the pail, and decides whether there are things which should not be there, such as paper, glass, etc. Then the kitchen garbage is inspected in the same way. The receptacles for this garbage are barrels which have a capacity of about thirty gallons.

Miss Watson. There is a very valuable report of an address given by Mr. Pitcher at the meeting last May of the American Association of Officials of Charity and Correction. This report worked out in connection with Kings Park State Hospital, Long Island, was upon kitchen organization and administration, and the thing that will be especially interesting is the matter of close calculation of quantities for fixed numbers, for he has given here the standard basic dietary ration tables, very liberally worked out. It would be exceedingly useful to dietitians and people making close calculations for institutions.

Mr. Dewey. In the ten or twelve tons of waste burned in a Chicago hotel we have a cause of the high cost of food in the country, and an annual loss that would build some of the institutions in which you are working. The key to this whole problem is the elimination of waste, not only using garbage, but also stopping the waste that makes garbage. In one of our club houses we substituted a cook who insisted

on carving and serving large portions. People ate only half of it; it took only a short time to make a \$1,000 waste.

Dr. Langworthy. You will find in bakers' journals and manuals recipes for using left-over cake dried and ground in place of part of the flour in making spice cake, gingerbread, etc. The uses of stale bread for bread pancakes, bread pudding, etc., are too well known to need mention.

Mr. Dewey. Ordinary hotel keepers are advocates of anti-economy. They vie with each other in conspicuous waste. There are hotels in which a guest gets two fresh sheets and two fresh pillow cases every day. The hotels vie with each other in the number of towels they can get into a room. A person goes into the average high-priced hotel and wants a little bit of steak and they serve him enough for a family of four or five. They get a class of people who rush to the highest priced hotel. The training of the average hotel man has been absolutely in the reverse direction from what we are working for. There is a sprinkling among the hotel men of people who are looking at this question in a broader way, and a more scientific spirit. The hotel interest today overshadows your churches and schools in the amount of money involved. Every little community has the hotel. The hotel men have their state and national associations. This is an age of training men for special work. I have been told recently by owners of large hotels that if I could find a man capable they would pay him any salary he chose to ask. There is an enormous demand for trained and educated people in the large hotels.

DORMITORY SUPERVISION

ELIZABETH MAY GOODRICH

Simmons College, Boston

The Committee on Dormitory Management has carried on its work during the months past with directors of dormitories in schools and colleges in various parts of the country and the work has been facilitated by the ready response with which our efforts to investigate certain lines have been received.

A list of the following topics was sent out to members of the committee, suggesting subjects for study:

1. *The Dormitory.* Service, care of rooms, laundry, trunks and storage, vacations, opening and closing of houses, care of equipment,

repairs, use of vacation, description of duties of house superintendent and her responsibilities in various positions, amount of equipment for fifty or one hundred students, and amount of replacement.

2. *Food.* Question of one large dining room or several small ones; proportion of servants to students served; number of tables, and persons accommodated at each; provision for care of dining room; provision for waiting on table; marketing and menus; storage of provisions; kitchen, serving-room and dining room; care and replacement of equipment.

From these topics they were asked to select five which seemed to them of greatest interest. The subjects chosen were put in the form of a questionnaire which followed.

The interest shown in these subjects may be indicated by some of the letters received. One person replied "It is most difficult to make a choice, each one is so interesting and so important." Another said that the duties of house superintendent would be of interest to all, since it was a topic it had not been her privilege to hear discussed at any of the meetings she had attended. And still another wrote:

I am glad to be a member of this committee for the sake of help and enlightenment along these proposed lines, since many of the subjects are very important ones with us, as we have 250 to house and 450 girls, boys and servants to feed three times a day, and we are most anxious to gain knowledge and assistance in the studying and solving of this problem.

The subjects decided upon by the committee as a whole were: Care of rooms, laundry, care and replacement of equipment, marketing, duties and responsibilities of the house superintendent.

From information based on the questionnaire it was found that service was required for care of student rooms in only three out of twenty institutions. In all others, students cared for their own, with the exception of the weekly cleaning and general care. The rooms in most instances were inspected daily by the house director or her assistant. In one case it was done by the matron and in one other by an upper servant. The lowest per capita rate was 1 to 6, and the highest 1 to 11.

In regard to laundry. Only three out of the twenty had sufficient equipment to do the household laundry and it was therefore sent to commercial laundries. As the flat rate, $1\frac{1}{2}$ cents, was the same in a western university and an eastern college, the price appears to be uni-

form in different sections. One of the three where the laundry was done at the dormitory, was where there were four halls of residence, the laundry being done in each house entirely by hand, but they were trying out electrical equipment with the object of installing a plant that would take care of the whole amount from each house.

In nearly all cases some provision was made for students to do their own laundry, in a few instances without charge, but the usual charge was 5 cents per hour where they provided their own soap, etc. The exceptions to this were 50 cents per month in one college and \$1 per year in another. One institution reported that students were allowed to wash in a lavatory where tubs were provided for the purpose and then go to a pressing room to iron, the charge being only for the rent of the iron.

In the care and replacement of equipment there was found to be no adequate method of estimating either the life or replacement of furnishings; one place, where oak furniture in students' rooms had been in use twenty years, reported that it was still in excellent condition; repairs had been made when necessary. It was also difficult to estimate the life of linen. Here again there seemed to be no definite method. In most instances the life of linen was from four to five years for bed linen and two and a half for towels. To keep up the supply one dormitory replaced one-fourth of the original stock each year. In another a sufficient supply was bought in 1910 and had not been added to until 1914 when they replaced the entire amount. Others purchased one new set each year. The charge for damage to building or equipment was in some cases only for "wanton carelessness" but in most of the others the charge covered cost of repairs or replacement.

Inventories were taken for furnishings once a year; for china, glass and silver at the end of each term, with very few exceptions.

Under the head of food. In the matter of contracts the reports showed a divided opinion. Some felt that where there might be a saving in price the quality was often doubtful. Others contracted for butter, eggs, canned goods and some groceries, and also meats successfully and advantageously, while still another stated that the economical value of contracts could not be rated too highly. To quote the wording of this report it was said:

The time given to careful testing of different goods is repaid in economic saving, more fully than in any other labor. Where there were competitive bids by local dealers the need was felt of making use of contracts.

Quantities purchased always depended on storage and refrigeration which in most instances was inadequate.

One only reported a large store room for unpacked goods, a large pantry and a fine refrigerator of 4500 pounds capacity.

In regard to the buying of meats there was also a divided opinion between buying by the carcass and buying selected prices for particular needs.

The question of inventory of food consumed, food returned from the table, waste and per capita cost was regarded in most cases as an impossible task to do with any satisfaction or system. One reports that where there was no central dining hall and kitchen for four separate dormitories, to accurately work out this problem often enough to be of value would require the services of an extra worker. Another reported that inventories were taken from supplies purchased but no record was made of table waste. In still another institution, inventories of food and per capita cost were made daily from statements sent to office from kitchen, bakery and storeroom. All seemed interested in this subject, but gave nothing clearly defined in regard to it. It may be that the committee on waste has discovered some method that will prove valuable.

The duties of house superintendent were with few exceptions a supervision of all matters pertaining to the care of the house and the welfare of its occupants, for example, buying of equipment, food supplies, making of menus, employing help and scheduling the work, attending to repairs and replacements as needed. The exceptions were where care of house and dining room and kitchen department were carried on under separate heads, and where material duties and supervision of students' behavior were included. In reply to the question how far training was necessary for efficiency in dormitory management, it was generally conceded that service in this direction must be professional in order to give the greatest satisfaction.

In the digest of the questionnaire of which I have given you a brief summary, it is plainly evident that with all the work and thought which have already been given to matters in this line, there are still problems to be solved, and standards to be set which shall prove applicable to individual needs, and the committee recommends for your discussion the subjects of contracts, some uniform method for estimating the life of equipment, and for the inventory of food supplies in relation to consumption and waste.

SCHOOL LUNCHES

ALICE C. BOUGHTON

Superintendent of Elementary School Lunches, Philadelphia

The School Lunch Committee organized a symposium on school feeding for the Fourth International Congress on School Hygiene held in Buffalo, August 1913.

There were two sessions, morning and afternoon. At the morning session the papers and discussion centered on school feeding as a part of the School Hygiene Movement. There was a large attendance of physicians, nurses and teachers primarily interested in nutrition of school children.

At the afternoon session the papers and discussion dealt with the administrative side of the movement in elementary, secondary and rural schools. In addition some educational, social and economic aspects were elaborated.

The entire program is printed in the "Proceedings" of the Congress. Several papers¹ have appeared in the JOURNAL and of others the committee has reprints which it will be glad to furnish to any one interested.

Through the hospitality of Miss Small an informal group of about thirty persons met and had luncheon at the Teachers' Club. There was open discussion, and points were brought up which could not be covered in the sessions. The idea of the luncheon was a happy one, as it not only singled out the group interested in school feeding, but also prepared the way for an interested audience at the sessions.

In connection with the Scientific Exhibit of the Congress, the committee prepared a school lunch exhibit, composed of photographs, diagrams, and statistical material pertinent to the history and present scope of the movement in this country and abroad. It comprises two units of five screens each with stands for mounting and locked traveling cases. The National Child Welfare Exhibits Committee gave valuable advice and assistance as to the arrangement of screens which were built according to the plan used by the Child Welfare Committee for all its exhibit material.

For loan purposes the exhibit was arranged in permanent form,

¹ JOURNAL OF HOME ECONOMICS, June (1914), pp. 207 and 213; also December (1914), p. 437.

and during the winter has been used by several colleges. The chairman will be glad to give further information to anyone interested.

Plans are now under way for the re-organization of the committee on a better working basis, and for the extension of its work. On these plans a later report will be made.

FEEDING SCHOOL CHILDREN IN NEW YORK CITY

EDWARD F. BROWN

Executive Secretary, New York School Lunch Committee

The New York school lunch service has a special significance at this time, because it represents the very first endowed school lunch service in this country. Through the generosity of Mrs. Elizabeth Milbank Anderson, a generous sum of money is being devoted to a Department of Social Welfare in the New York Association for Improving the Condition of the Poor. This Department consists of the Bureau of Public Health and Hygiene, the Bureau of Food Supply, and the Bureau of Welfare of School Children. Under the latter head provision was made for the New York School Lunch Committee.

The committee in 1912 was on the point of disbanding owing to the uncertainty of its contributions. Mrs. Anderson, in making her gift, very wisely directed that a part of the fund should be devoted to continuing and extending the work of the School Lunch Committee. In 1912 lunch service was operated in eight schools on the individual kitchen plan; at the opening of the current school year lunch service for seventeen public schools was established under the so-called group kitchen plan. The scope of the service now extends to seventeen elementary schools with a register of over 25,000 children. The Committee consists of a staff of over forty paid workers.

The Board of Education and the Lunch Committee have an understanding that the lunch service may be extended to as many elementary schools as possible on condition that no liability accrues to the Board of Education by reason thereof. For the first time, a sum of \$2300 was appropriated last year by the city for the purpose of installing kitchens in the schools where the committee had agreed to operate. That was the first official recognition, if it may be called

such, of school lunches on the part of the Board of Education in New York City.

The plan for 1913-1914 was to extend the service from seventeen to twenty-eight schools with a registration of 44,000 children, and in order that this might be done the committee asked the Board of Education to provide \$6500 for the equipment.

Each child is required to purchase a half pint of warm, nourishing soup before he may purchase anything else. It is believed that this "forced feeding" is necessary especially as an educational feature.

The Association maintains a number of hospitals and provides relief for about three thousand families, besides engaging in a number of other activities that make it advisable to purchase food in large quantities. The Association has organized a food supply store where the committee stores large quantities of food and from which from time to time it draws supplies. The committee is able to enlist the service of expert buyers, and large sums are saved in buying large quantities of foods.

By operating under the central kitchen plan, that is, by preparing food in a centralized kitchen from which the food is distributed to a group of four or five neighboring schools, money is saved in the cost of labor. The serious problem, however, in the operation of a central kitchen plan is the transportation of the food. In the beginning we had to depend on pushcarts propelled by janitors and by the older and stronger school boys who could be drafted into the service; and when we could not get either of these, we had to depend upon floating labor, which we found uncertain and unsatisfactory. During the current year we were able to start in a new direction. We contracted with a truckman to call every morning at ten-thirty, load the large sanitary-covered containers (large enough to retain the heat) on his wagon, and distribute them to the schools. We found this plan entirely satisfactory. For the 1914-1915 term we have arranged for horse and wagon delivery entirely.

One phase of the administration of the school lunch service in which the committee has been particularly successful has been its system of accounting. The aim has been to demonstrate to the Board of Education that no educational system is complete unless it provides not only for the mental growth of the children, but also for the physical growth. No school system is complete unless it provides for feeding children who, in their ordinary course of life, are not given the

proper care in the selection of food. Realizing these facts, and realizing, too, that we should demonstrate a self-supporting school lunch plan, we entered upon a rather comprehensive and intensive cost accounting system. We determined in the beginning, for instance, to know at the end of the year what it cost for supervisory service; administrative salaries; clerical salaries; kitchen help; various foods, such as meats, fish, soup, green groceries, dry groceries, fruits, milk, butter, eggs, bread, crackers, and the like; the cost of equipment for transporting of food; printed office supplies, and the like; charges for telephone, telegraph, postage, periodicals, express, cartage, rent, and traveling expenses.

Another necessary step that has been made is in supervising the health of those who handle the food supplied to the children. Coming in contact as we do with a large group of children, we felt that it was important to obviate so far as it was possible the contamination of the food and the transmission of any disease from the food handlers to the children. Therefore we had each of our helpers undergo a thorough physical examination in order to ascertain whether they were free, as carriers, from such diseases as tuberculosis, syphilis, and typhoid. We urged each of our helpers to be vaccinated, with the result that two-thirds were immunized. There is a group of one hundred and thirty children who assist in the school lunch service. We had these children thoroughly examined, but in a manner unlike the ordinary medical inspection in which the children are examined completely dressed. The committee had this group of children stripped to the waist, and the result was that we discovered one case of a possible typhoid carrier among them, and that some of them had live *Pediculi*. These children were, of course, taken out of the service, and we were reassured that our food was absolutely free from the possibility of disease transmission through the helpers.

We have extended the scope of our work but slightly from the service of food to the children of elementary schools. In the city of New York there are still private caterers serving lunches in some of the high schools. In others, the student organizations maintain the service for their own benefit. Where the concessionnaires serve the lunches, all the profit accrues to them. We undertook an investigation to see if it were possible to consolidate the elementary and high school service so that the slight profit that could come from the high school service might cover our slight deficit in the penny articles in the ele-

mentary schools. We made an investigation and found that the high school service in the city of New York was a business involving nearly a half million dollars a year.

Our proposal to the Board of Education, which is still pending, is briefly this: that the Board of Education authorize the committee to operate the service in all the high schools; that the committee will seek to provide food of high quality at a minimum cost; that the committee will seek to make that as low as possible, but should any surplus accrue in the operation of the high school service that surplus should be applied to the paying of the deficit of the elementary service and extending the elementary service further than is possible at present.

This proposal appealed to many of the members of the Board of Education, and, unless the student organizations in the schools where concessionnaires now operate take over the school lunch, they are inclined to turn it over to our committee.

The lunch service in the seventeen schools during the last year embraced an average daily attendance of 3300 children, and during the period of service from October 1 to May 22, 1,249,000 portions of food were sold.

The central kitchen plan, which we operated during the last year, has proved its greater economy as compared with the individual kitchen plan of the previous year. We have been able to save on each portion of food the sum of nineteen hundredths of a cent: that is, for each of the 1,249,000 portions of food we have saved nearly two mills in labor, supervision, and transportation costs. This saving conclusively proves that the operation of the central kitchen plan in large cities where the schools are situated near enough together is superior to the individual kitchen for each school. During 1912 the deficit per school was \$480.10. Through the concentration of our energies and the expansion of the work, we have been able during this current school year to reduce this deficit to \$272 per school, which puts the service on the road towards being an entirely self-supporting scheme.

The total expenditures in the operation of the seventeen schools have been, roughly, \$17,000; the total receipts have been \$12,000, thus leaving a gross deficit of \$5,000. The equipment which is an asset to us, less the depreciation, leaves a net deficit of \$4,624.52 in the provision of 1,249,489 portions of food. The deficit for each

penny portion has been thirty-seven hundredths of a cent. This means that we are counting every conceivable item that is a legitimate charge to school lunches.

Next year we plan to serve lunches in twenty-eight schools with 44,800 children, and with a further concentration in preparation and further expansion in numbers of schools, we may be able to reduce the deficit further. The feeling that we ought to strive for this self-supporting elementary school lunch service, is particularly borne in upon us, not merely because of the social service that may be rendered, but also because it is good business. In the city of New York during the last school term there were some 190,000 children who were retarded in grade. The per capita cost of education is nearly \$20, and we figured out that the city of New York lost about \$3,800,000 in the re-education of the children who for some reason have been retarded. We certainly can attribute a considerable part of this to the physical incapacity of these children for study. Surely it is folly to spend large sums of money on the education of children who because of hunger are not in a receptive mood for the educative process.

WORK OF PRIVATE ENTERPRISES

Other fields of operation involve the request recently received from the Metropolitan Life Insurance Company, which feeds four thousand of its employes daily without charge, for us to make a survey of their lunch plant, including their system of purchasing, preparing, and handling the foods, and the dietetic and sanitary features of this service. This request was complied with.

We feel that while there is no organization dealing exclusively in the extension of lunch facilities to factories and office buildings, we ought to step into that vacant place in the beginning and do as much as we can, and later, if the demand is sufficient, organize a service that will endeavor to establish lunch rooms in factory buildings.

The Anderson Foundation provided for \$50,000 with which to study ventilation. The Ventilation Commission is making certain experiments in the city of New York, and we undertook this summer to feed the subjects of these experiments in order to ascertain the relation between atmospheric conditions and appetite.

Another item of coöperation has been the request received from the New York City Department of Health to assist it in the organization of a lunch room for its employes. We feel that this is a most signifi-

cant step because just as soon as the Board of Health Department demonstrates to the city that there is a sufficient demand in the city departments for a lunch service to be run on a non-commercial basis, the other departments of the city will request a similar service.

THE FORMATION OF A SANITARY FOOD CODE

C. F. LANGWORTHY

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The subject under consideration, a sanitary food code, is a proposal rather than a reality. Members of this association realize the great importance of food sanitation, and they have given much thought to existing conditions and to the consideration of possible remedies. Undesirable as food adulteration is, the greater danger lies in unclean food, which is a menace to health because of the disease-producing organisms it may convey, and which is disgusting because of the street dust, excretory products, and all uncleanness, which it has acquired. Existing conditions are bad, but the situation is not without hope, for the ways in which food becomes contaminated are known, also the nature of the danger, and many possible remedies. Best of all, there is evident in many different quarters an attempt at improvement. It seems certain that a set of rules for the guidance of all who come in contact with food would prove a great help. and this association can render good service if it will provide such a guide. For the best results it must secure the coöperation of public officials, health officers, producers of food, manufacturers, dealers in food, housekeepers, and others interested in the matter. Before discussing the content of such a code, it seems worth while to speak of existing conditions with respect to food sanitation and of matters that make such a sanitary food code necessary, also to point out some of the things that are being done to make things better, and to speak of ways in which we can all help to attain the desired object. Without doubt it is true that many of the conditions surrounding the growing, handling, manufacture, marketing, sale, preparation, and service of food which are so undesirable are the result of carelessness and ignorance rather than of design: that is, they are ascribable to a failure to recognize that many common practices are not only an offense against true cleanliness and decency but also a menace to health.

All of us—the grower, the dealer, the servant who prepares the food, and the family who sits at the table—are consumers of these food products; therefore we cannot afford to permit insanitary practices. Unless we are careful all along the line, we are all likely to suffer from the carelessness or ignorance of some one. Selfish interests, if no other reason, should make us all willing to work for better conditions.

Existing conditions range all the way from the unspeakably bad to the extremely good, but the proportion of good is growing larger. It is well to realize, too, that the evils that we are trying to eradicate are not confined to the practices of producers, manufacturers, dealers, or public distributors of food, but are too often in our own homes. Nor are the dangers confined to any one class of foods. They may lurk in green vegetables and fresh fruits, as well as in dirty milk, or meat and fish unfit for sale. For example, green vegetables grown in soil fertilized with night soil are a great source of danger unless they are cooked before they are served, for contamination with fecal bacteria (and this too often means pathogenic bacteria) is almost certain. It has been found by experience as well as by laboratory work that, although washing lessens the danger and should never be omitted, it is practically impossible to do away entirely with such contamination by this means, even though all visible dirt may be removed. It follows then that the contamination must be prevented. No European resident of China or Japan, we are told, would think of eating green salad plants grown by the native market gardeners owing to the general use of night soil as fertilizer. There is a possibility of contamination of strawberries or other fruits that grow near the soil or that drop from the tree to the ground, and if fruits are once contaminated, it is difficult to make them safe except by cooking them, though it is comparatively easy to remove the sand, bits of earth, and straw, which may have adhered to them. Fortunately, such pollution of soil through wrong use of fertilizers has not been general in the United States, and it is perhaps for this reason that we use much more uncooked fruit than is found on the table in many older countries. Nevertheless, there is a very real danger from this source, as is evident from the efforts of the United States Public Health Service to do away with this practice in soil fertilization.

Food can be easily contaminated by handling. Utensils washed with polluted water may readily convey typhoid fever. Milk pro-

duced and handled under insanitary conditions becomes unsafe. A typhoid carrier who handles food may convey the disease to many others. Typhoid Marys, unfortunately, are not at all a rarity. A person who is suffering from an infection of the nose or throat may cough or sneeze without covering the face and spread the bacteria of infection as well as droplets of saliva over food and everything else that is within a fairly wide radius. Sewage flowing over oyster beds may contaminate oysters. Dirty clothing, dirty surroundings, unclean ice, unwashed hands, rats, mice, flies and other insects, unclean air, and a lack of proper sewage and drainage facilities—all these may be dangerous causes of pollution of food. Perhaps the greatest danger of all is the human hand, for nothing comes so often in contact with filthy things and food products alike, and only too often without proper washing. Some food manufacturers display conspicuously the sign: "When you leave the room for any purpose whatever always wash your hands before returning to your work." Such a sign would not be out of place in every kitchen, and in every shop where food is handled. Could we not display some similar sign that would make us realize that after we have gone back to our work with clean hands we must continue to keep them so and avoid the contamination that comes from running the fingers through the hair, putting them in the nose, ears, or mouth, or doing similar things?

That such conditions as those above mentioned exist, no one who is a careful observer can doubt; that such things are disgusting, no one can deny; that they are dangerous, no one can dispute, for it has been established by a great mass of clinical and laboratory evidence. To cite only one instance, a recently published work by Stiles shows that the digestive tract of man very commonly contains a micro-organism that can be there only because something that has suffered fecal contamination has been taken into the mouth. Even if such conditions did not involve illness, common decency would make any one wish to avoid them, almost as much as he would typhoid fever, cholera, or other diseases that must also gain entrance through the mouth.

Persons as a rule are very careless in the matter of washing their hands. This fact has been established by counts that have been made in toilets in public places by one of the philanthropic associations in New York. Would a similar count in hotel kitchens or in home kitchens indicate a higher percentage of cleanliness in this re-

spect? At any rate, we may be certain that in such kitchens it is not universal, for cases of typhoid are often traced to a typhoid carrier who has spread infection by this method.

The sterilization of cooking utensils, drinking glasses, cups, knives, forks, and spoons, which otherwise may convey "colds," diphtheria, pneumonia, and other diseases, from mouth to mouth, is something that should be insisted upon, just as much as the sterilization of milk cans or factory equipment. We believe that service of food is more often cleanly in the home than under commercial conditions, but we have not yet reached the stage when we make sure by examination that those who handle food are free from communicable disease. Not all, I think, are as careful as they might be in the matter of washing the hands, attention to finger nails, avoidance of tasting from a spoon and putting it back into the food without washing it, or in the matter of sweeping and dusting while food is being prepared, and of keeping flies, household pets, and other possible distributors of dirt and micro-organisms out of the room where food is handled or served. In the public service of food as well as in its preparation there is greater danger, for the personal interest which is present in the home is lacking. There are also lacking the supervision and the opportunities for cleanliness (shower baths and the like) which are commonly found in high-grade food factories. There are very few homes where there is any medical inspection of those who prepare and handle food, though this is not infrequently found in the commercial food industry. This matter of the health of employes and cleanly habits in working is of the utmost importance, and every effort must be made to see that proper sanitary regulations are enforced in the home and out of it.

Better practices in the public service of food must prevail just as much as better means of handling it in the factory or in the shop. It should be no more difficult to teach a waiter to avoid polishing the dishes with a soiled napkin than it is to teach an employe to wash his hands before he packs some food product into a box for shipment from the factory. If we cannot make sure in any other way about the napkin and service towel, we should insist that the service towel be distinctive in color. It can then be easily identified. If the napkin were used only to wipe the lips or the fingers or to protect the clothing from bits of food, which fall accidentally, there would still be reason enough to limit it to its obvious purpose, but we cannot overlook the fact that often it covers a person's face when he sneezes or coughs,

even though it may not very often serve the other purposes for which a handkerchief is designed. Its other uses are too dubious to permit its use as a service towel.

There was a time when we were only too inclined to dismiss these disagreeable subjects with the statement that persons have always done these things and the race has survived—a statement which is true, though the force of the argument is lost since we have every reason to believe that the percentage of survivors was not so great in the “good old times” as now. That the proportion increases with cleanliness is shown by the diminished infant mortality that follows the establishment of a clean milk supply. Then too, we are always meeting the “dainty-minded” who say that these things are disgusting and unpleasant to talk about, that we cannot avoid them, and that it is therefore better to forget them. Concealing an evil is never a remedy, and we must talk of these as of many other unpleasant subjects at the right time and in the right place, in order to arouse public opinion and bring about better conditions.

After considering the problem, representatives of this Association came to the conclusion that the whole cause would be furthered by the preparation of a code, or guide, containing simple rules for the guidance of all those who come in contact with food in one way or another in its long journey from the farm to the table. Accompanying the rules should be some explanation of what contamination means. It should also be made plain that visible dirt, undesirable as it is, is less to be feared than invisible contamination that may accompany it or that may be present even when the article looks clean, and that the dangers of dirty food are such that no one can be sure that he will escape them.

Something should be said of the scientific and economic facts that underlie the whole question of a clean food supply. There are many reasons for believing that producers and distributors of foodstuffs, those engaged in the sale of food in hotels and other public places as well as in shops, purchasers of food, and housekeepers would join gladly in a campaign for improved conditions. Many manufacturers already insist on a standard of cleanliness, which does not exist except in carefully supervised homes. Many persons who are engaged in the sale of food on trains and in hotels and restaurants have also established a high standard of cleanliness. The same may be said of the merchants who realize that goods must be protected from dust and insects

and must be handled in a cleanly way. Every one knows that housekeepers and other purchasers of food are every year realizing the need for clean food, sold under clean conditions, and for making sure that those who prepare the food for them do their work in a cleanly way and are not affected with disease which they could communicate to those who share the results of their labors.

It would be interesting to cite in some detail the efforts that are being made by manufacturers, producers, and distributors of food to insure better conditions; to refer to the efforts that are being made to secure clean food factories and to insure decency in all that pertains to food service in hotels, on dining cars, and in other public places; to discuss state and municipal regulations for governing the production and sale of foods; to note the efficient services of health officers, physicians, and teachers, as well as the increasing interest shown by housekeepers; and to cite at least a part of the valuable information on this subject which has accumulated in the laboratory and been published in journals and books.

The members of the Council of the American Home Economics Association who have had this sanitary food code under consideration have made an attempt to bring together data and have done other preliminary work. Further information concerning the project can be secured by those who are interested.

If the sanitary food code project finds favor with the Association, much remains to be done before the code can be compiled. The project, it is believed, may well form a part of the work for the Memorial Fund Committee, for no one was more interested in all these matters than Mrs. Richards, and few have made a greater contribution to the subject than she did through her work for a pure water supply, by her writings, and in other ways. At the same time she was a splendid example of personal cleanliness in food matters and all else that pertains to right living in the home and out of it.

UNIT COSTS IN INSTITUTIONS

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It is practically impossible to say anything new as to the reason why we have unit costs. Astronomers in talking about the distance of stars from the earth do not say that a certain star is so many mil-

lion miles away, they say it is so many light-years away. If we were to read that a certain star was two hundred fifty-seven quadrillion miles away from the earth, it would mean little. We must have the terms in measurements that we understand; therefore, if we are told that the light of a certain star started from that star when David was the king of Israel, the distance means something to us. The statement that the cost of food in a hospital is \$347,000 a year means very little unless the cost of food in some particular hospital is used as a standard. A comparison may be made in regard to two things: namely, the scale of expenditure or the standard of living, and the number of people. If the cost per capita for food in a certain institution is two dollars a day, we decide whether that expenditure is high or low, by comparing it with the normal.

For institutions the standard unit cost is computed per resident day. Allowance must be made for the fact that the size of the institution will have a great deal to do with the unit cost. Mr. Dewey has been trying to learn what is the unit for which a kitchen may be run most economically to supply one hundred, two hundred or four hundred persons. A great many persons believe that the most economical unit for cooking and serving is four hundred persons; others believe that it is one or two hundred. In any case it is necessary to know the size of the institution in order to know the possibilities for economy. Increasing the scale of operations may increase the economy of operation up to a certain point; equipment is increased; the cost of operation immediately increases again until a new maximum scale is reached. That is particularly illustrated in the operation of railroads. The cost per mile of running trains on a single-track road decreases, if traffic increases, within the limits of efficient operation. The minute traffic increases beyond that point a double-track line must be laid. Then the expense per mile of running trains increases tremendously because twice as many miles of track are being maintained. If traffic continues to increase then the cost of operation decreases until the capacity is strained and a third track must be laid. The matter of unit cost must not be taken with extreme seriousness unless it is realized that the scale on which an institution is operated has something to do with it.

Unit cost is the cost per resident day, not per capita day. The latter is very different from the cost per resident day and includes the cost of feeding and housing residents, servants and perhaps laborers.

If a school unit cost is being computed for a school, the resident day of the students must be used as a basis; if for a hospital, the resident day of the patients; if for a hotel or club, the resident day of the guests. The first division is into the cost per resident, and cost per employe. The result will not be the average of the two, unless the institution is very unusual, because there are not as many employes as guests. The ratio between employes and residents varies from one employe for perhaps five or six guests, to two employes for three guests. This ratio depends entirely upon the kind of service rendered, and it will have a very great effect upon the unit costs of the institution.

The division of unit costs into the two classes, the cost per resident day and the cost per employe day is very unsatisfactory because neither the waste nor the economy is located exactly, but merely for the institution as a whole. The fact that there is waste or economy is only the basis for intelligent management of an institution. Waste and economy should be located in the different departments, for in an institution there may be a very well administered purchasing department, and a badly managed cooking department.

Unit costs should be subdivided into various elements. The raw food cost should be subdivided into per capita day, per resident day and per employe day. These costs should be compared with those in other institutions and in this way they may be found to be high, normal or low. Different standards of living should be taken into consideration in making these comparisons.

The next subdivision of the unit costs should be into the cooking cost per capita day, per resident day and per employe day. It may happen that the cooking costs per resident day and per employe day are the same, but in most cases the cooking cost varies proportionately with the raw food cost. The cheaper foods are usually less expensive to cook.

Serving costs should be subdivided in the same way. This could not be done in hospitals because the serving and the nursing are so nearly combined that it would be impossible to divide them. The housing cost should be subdivided in like manner. The total housing cost is the cost of the sleeping accommodations, the housekeeping care, the care of rooms, and so on, including the care of the general rooms, the halls and the stairways. The laundry should be divided into the cost per resident day and per employe day if it is possible to divide

them. The administrative cost is usually computed per capita day, although it might possibly be subdivided.

These are only the main subdivisions, and they should be subdivided further. The raw food cost ought to be extensively subdivided. A committee spent several days in discussing what subdivisions of raw food cost ought to be made in order to enable a person to judge intelligently or efficiently both the purchasing and the dietetic standards of the institution. For instance, if one person obtains certain kinds of dietetic results by purchasing one kind of material, and another person obtains the same results by the purchase of another kind of material, obviously the costs would be different, or if one thing is substituted for another because it is less expensive, or because one group may be devoted to the taste and the other to the psychological effect of the diet.

Certain main subdivisions of raw food ought to be made. The main subdivisions, accepting them for the moment as very unsatisfactory, are in the first place, meat costs, because food costs are very largely affected by the degree to which meats enter into the diet, then milk, cream, and possibly butter costs combined. The latter are dairy products and they are grouped together for that reason only, for they serve different purposes. Fruits, fresh fruits particularly, furnish another group of costs; flours, cereals and the like still another group.

The housing costs should be subdivided into at least four items of which the first is the rent, in case rent is charged. Most institutions do not pay rent, in which case five separate items are combined in place of rent cost. These five items are interest on the investment or interest on the value of the property; insurance, taxes; depreciation; and maintenance. Those five items are the cost of the buildings housing the institution, and they cannot be avoided as cost. The difference between depreciation and maintenance may be stated in this way: the amount that is spent to keep the property in condition is called maintenance; the amount that should have been spent, or the equivalent of that amount, is depreciation if it is not spent. A chimney may last fifty years, but it cannot be kept in condition by putting in two bricks every year. You must let it run down and then repair; there must be a certain amount of depreciation in every building. The chimney may have no repairs for twenty years, but in the meantime changes have been made in other things every year.

The second and third costs are lighting and heating and these should

be put in terms of units. If the lighting cost per capita or resident day is more in one institution than in another and the former institution is not of a higher grade, either the cost in it for light is too much or the persons in it are wasting light. The same thing is true of heating. In certain institutions cold air is a remedial thing, and the heating cost should be lower there than in other institutions.

The last housing cost is the housekeeping cost—the care of the building, such as cleaning, dusting, scrubbing, making beds, and the like. The minute any of these subdivisions are combined, it is impossible to learn whether the institution is being capably administered or not. There may be a loss somewhere offset by a particular saving or a particular fortunate situation. There is no reason why a manager of an institution should be given credit for a low cost due to a favorable situation. If, for instance, an institution is rather remote and entirely surrounded by grass, the dusting cost should be low. Care should be taken to differentiate those costs that are due to management from those that are not due to management, and this cannot be done unless the costs are subdivided.

There has recently been published the first study in cost accounting in construction work although a great deal has been published on operating costs. The pamphlet contains this very interesting illustration. The persons for whom the system was devised are producers of concrete construction work. They have for a number of years been studying the desirable unit cost to maintain in their business. They have shown in this pamphlet in what appears to be a very simple type of construction something like forty or fifty different elements for which they compute unit costs. Last year they made a study of one job that on the face of it appeared to be very efficiently directed so far as anybody from the superficial idea of the subject could see; the men were working faithfully and hard and everything was satisfactory. After that job had been under way for six weeks they made a study of the unit costs. They found out how many feet of concrete work had been done, how many tons of steel had been put into the reinforcement, and so forth. The result was that they found themselves \$10,000 behind on the construction up to that time and if it had continued they would have lost \$20,000 or \$25,000 on this job. The reason for this condition was not apparent, but they found out, by computing the unit costs, that they were losing money and they shifted their force. They put most of the superintendents

on other work and put new superintendents in charge. In five weeks they had recovered the \$10,000 and were making profit on the work. This example illustrates the necessity of subdividing unit costs and applying them.

DISCUSSION OF MR. COLE'S PAPER

Mr. Hinkley, of Hotel Staller. The business in which I am interested is entirely different from that in which most of you are engaged. The hotel proposition is purely for a pecuniary gain, and we have not as yet gotten to the question of unit costs. We feel that, in our business, cost accounting is the very crux of the whole question. In our two hotels we have now established a cost accounting system, carried on so that we know exactly what each hotel is paying. We know too what the results should be in all of the different departments. We have placed the two hotels on a percentage basis, and everything is figured on percentages. We know what percentage should be allowed for the housekeeping, the labor, the power, the laundry, etc. The restaurant, which is practically all à la carte, for we have no American plan, is an entirely different problem, but there again it is a question of percentages. We hold our steward, in each hotel, to a certain percentage upon the cost of raw supplies. We do not charge the dining room with rent, light, heat, power, laundry or cleaning, but we arbitrarily fix a certain sum for that amount and we offset it by having the steward feed all employees.

We are endeavoring to get away as far as possible from feeding employees. We have abandoned the feeding of officers, and arbitrarily increased their wages or salaries so much per month and asked them to take their meals out. In our newer hotel in Cleveland we have put in a service which is practically a cafeteria proposition. We have the ranges and the steam tables, and employees help themselves.

We have the restaurant on a basis of percentage also. On meat, sea food and vegetables, it is purely a percentage proposition, one house against another. And when the percentage is very low in one house, then is the time to analyze the cost sheets. We place it on a monthly basis. We take a percentage of the profit so that if a man buys \$3000 worth of meat in one house, and shows only 17 per cent profit and another man shows 35 per cent, then we know there is something wrong because they are buying the same meat; either they are selling it too cheap in one house or giving too large portions. Our

sheets contain columns for every article of food, except butter, milk, and cream, which goes into the cooking of the dishes, but every article that is served is analyzed. Whether or not that percentage proposition could be extended I do not know, but it is an excellent standard for more than one institution that is operating under the same management.

We run our own laundries. In our Buffalo house we have a laundry equipped for flat work; in our Cleveland house we do both the flat and bundle work for the guests and so there is no comparison as to figures at present. Out of 1000 employes probably three or four hundred are Polish women, and it is necessary to keep them in the buildings and feed them. Our percentage is not only of labor, but of supplies and everything else. The percentage basis is rather new in the hotel field. We do not analyze an item like coffee. We take all meats, poultry, sea food, fish, vegetables, pastry and ice creams, which are practically all that can be analyzed as percentages, but of course in the further analysis of the business, we do keep a complete table of every article. Every meat is separated but not as percentages. That is merely for the guidance of the steward in knowing what is popular. The percentage is of the meat as a whole. Staple supplies come to us at regular intervals and are charged to expense.

Mr. Hoffer, Hill School, Pottstown, Pa. We have about 370 boys, nearly all of them living at the school, and we feed about 100 servants. We have two departments, the one the administration of the school and the other the kitchen and bakery. We have a monthly distribution, and we make counts regularly to know how many people are fed in the school department, how many in the help department and the number of guests. In the total cost we include fuel, the breakage and the maintenance of utensils. This is divided by the number of meals, to give us the cost per meal per month. With that we carry a complete report of the year, and in that way decide whether the cost is increasing and how it can be decreased if necessary. On the other side of the account we have the executive department, and the school department, including the salaries of the teachers, and the miscellaneous department. Then follow the grounds, repairs and renewals, the stables, automobiles, taxes, and everything that belong to the general administration. The boys at the Hill School come mostly from wealthy families who are accustomed to very expensive living, but the Hill School people have believed that the table has been de-

vised largely for their good rather than for their taste. The cost per meal never runs over 23 or 24 cents. The fee for the year's tuition is \$1000 which includes repairs, renewals, everything except rent.

Miss Proctor, Junior Bursar at Bryn Mawr. We have an allowance which was given some years ago, and we are trying to work out now, from this original allowance which has not been increased, how the cost of living is going up in our neighborhood in Pennsylvania. It is a very wealthy section of the country and the question of quality is of very great importance to us in our college because we have a large class of wealthy students to cater to. We allow 36 cents a day for food and divide it into different amounts for each meal, 9, 12 and 15, and reckoning it on the basis of 12, use $\frac{3}{12}$, $\frac{4}{12}$ and $\frac{5}{12}$ to estimate the cost of things, taking into account absolutely everything, including salaries of the housekeepers, cooks, maids and men, cost of preparing foods, the cost of the food itself. We found that the last college year of 1912 and 1913 we were just within the limit of our charge. Some years ago it was a matter of income and we had come up to the limit. This year we are working to see how much we would have to increase board, to find out how we would still keep our standard up, give them sufficient food for their vigorous outdoor life, and not run beyond our limit.

Miss Fleming. We have helpers in the kitchen regularly employed who come into the cafeteria for their meals. Then there are student assistants at 20 cents an hour, and to them we give a rebate of thirty per cent for every hour they work. For instance, our half-monthly payroll is made in the form of a memorandum to the person having charge of the cash register, showing the number of hours that each person has worked for that 15 or 16 days, and that memorandum is a guide to the person at the cash register in giving rebates. This is for students employed by the hour. For regular employes we keep a record showing the actual sale price of the food they receive but board is a part of their wage. Their meals average about the same as the meals of students coming in.

Miss Sperry. We maintain a dining room for the students at Berea College. During the winter term when there is extra expense for heat and light the per capita cost is \$1.50 per week. In the fall and spring it is \$1.35. We have good storage room and buy many of our supplies by the carload and our canned goods in gallon cans. We have a school garden and a dairy from which we secure milk at the rate of

20 cents a gallon in winter and 16 cents in the spring and fall. We buy the shoulder clods of beef at 13 cents. There is a refrigerating plant that makes it possible to store perishable goods and we are experimenting on the preservation of eggs. Supplies are selected and records kept through the requisition sheets. The rent of the boarding hall and the initial cost of equipment is not charged to the dining service, but heat, light and help are all included in the \$1.35 and \$1.50 per capita cost.

We serve meat once a day except with the occasional substitute of fish. We have found that dried beef at 30 cents a pound and good milk gravy makes a less expensive dish than solid meat. In the spring term when eggs are 15 cents we serve them once a week in place of meat.

Student help is used as much as possible. The aim of the school is to give students employment and in getting new machinery the question is always considered whether it will eliminate student help too much. Wages vary from 5 to $12\frac{1}{2}$ or 15 cents an hour. We pay according to the grade of work the students do.

THE COST OF FOODS IN NON-MEAT DIETARIES

LENNA F. COOPER

Head Dietitian, Battle Creek Sanitarium

The cost of food plays no small part in the present high cost of living. The fact that meat is one of the most expensive articles of diet is illustrated by a comparison of the costs of a mixed diet and of a non-meat diet.

The costs of foods given here are from the non-meat dietary in use at the Battle Creek Sanitarium.

There are at this institution two classes of dining rooms, one for the guests, another for the employes. For the guests no pains are spared to obtain fresh fruits, vegetables, or other delicacies that are on the market whether in season or out of season.

In the purchasing of supplies the sanitarium is at considerable disadvantage, however, for it is distantly removed from market centers, being about one hundred and fifty miles from Chicago, the nearest one. Consequently much of the produce must be purchased without having been seen, and it is often somewhat deteriorated when it

arrives, thus entailing considerable loss. The installation of a cold storage system and the exercising of extremely careful supervision has cut down the loss very materially in the last year, as will be shown by figures given below.

The cost of foods in the guests' dining room for the year 1912 amounted to 67.8 cents per capita per day, or 22.6 cents per meal. The first six months of the present year 1914, the cost of foods per capita per day has averaged 58.7 cents, or 19.5 cents per meal. The cost per capita per day is divided as follows:

Cream.....	\$.0615	Health foods.....	.0308
Butter.....	.0518	Bread.....	.0302
Eggs.....	.0307	Canned goods.....	.0778
Fruit.....	.0971	Nuts.....	.0085
Vegetables.....	.1379	Milk.....	.02576
Groceries.....	.03334	Beverages.....	.0113

The total cost of foods for this same period was \$67,866.44. The total number of guest days was 115,590.

A copy of one day's menu is given in order to give an idea of the variety of food in the guests' dining hall:

BREAKFAST

Fresh fruits	Toasted granose (wheat) biscuit
Cantaloupe	Good health biscuit
Apples	Bran biscuit
Cereals (with pitcherful of cream)	Coffee cake
Cream of wheat	Butters
Scotch bran brose	Nut butter
Toasted rye flakes	Palm butter
Gruels	Sterilized butter
Gluten gruel	Cooked fruits
Barley gruel	Apple sauce
Entrées	Prune sauce
Broiled protose	Relishes
Scrambled eggs	Malt honey
Vegetables	Malt honey with butter
Baked potatoes with brown sauce	Malt sugar
Potato cakes with gravy	Beverages
Toasts	Apple juice
Cream toast	Grape juice
Peach toast	Milk
Breads	Yogurt buttermilk
Whole wheat bread	Yogurt buttermilk with cream
White bread	Sanitas cocoa
Entire graham bread	Hot malted nuts
Breakfast toast	Minute brew with sugar and cream
Toasted rice biscuit	Kaffir tea

DINNER

Soups	Washington chowder	Toasted rice biscuit
	Lentil soup	Toasted granose (wheat) biscuit
Entrées		Good health biscuit
	Nut fillets	Bran biscuit
	Nuttolene with piquant sauce	Butters
	Spaghetti Milanaise	Nut butter
Vegetables		Palm butter
	Baked potatoes with brown sauce	Sterilized butter
	Creamed potatoes	Cooked fruits
	Fresh asparagus	Peach sauce
	Wax beans	Stewed raisins
Relishes		Beverages
	Lettuce with lemon	Apple juice
	Fruit macedoine	Grape juice
	Sliced tomatoes	Milk
	Malt honey	Yogurt buttermilk
	Malt honey with butter	Yogurt buttermilk and cream
	Malt sugar	Sanitas cocoa
Breads		Hot malted nuts
	Whole wheat bread	Minute brew with cream and sugar
	White bread	Kaffir tea
	Entire graham bread	Desserts
	Rye bread	Apple tart
	Breakfast toast	Cherries
		Pine nuts

SUPPER

Soups	Tomato macaroni	Sterilized butter
Toasts		Relishes
	Browned rice patties	Yogurt cheese
Vegetables		Malt honey
	Hashed brown potatoes	Malt honey with butter
	Kidney beans	Malt sugar
Cereals (with cream)		Cooked fruits
	Toasted wheat flakes	Plum sauce
	Farina	Pear sauce
	Gluten gruel	Beverages
Breads		Apple juice
	Whole wheat bread	Grape juice
	White bread	Milk
	Entire graham bread	Yogurt buttermilk
	Breakfast toast	Yogurt buttermilk and cream
	Toasted rice biscuit	Sanitas cocoa
	Toasted granose (wheat) biscuit	Hot malted nuts
	Good health biscuit	Minute brew with cream and sugar
	Bran biscuit	Kaffir tea
	Lettuce sandwich	Desserts
Butters		Lemon cream
	Nut butter	Sweet graham wafers
	Palm butter	Apples

The employes' dining hall is now conducted on the cafeteria plan. When the writer first became a member of the Dietetic Department of the institution, the employes' dining room was run on a semi-cafeteria plan. The food was placed on the counters, the employes passed by in line and took from the counters any amount of food that they wished. As they passed out of the dining room their meal tickets for twenty-one meals were punched. No price was attached to the individual dish. This gave the opportunity for very injudicious choice of food without any regard whatever to expense.

The writer then took a class of students in domestic science into the dining hall, and a week's dietary study was made. As a result it was found that between one-sixth and one-fifth of the total amount of food issued from the storerooms finally found its way into the garbage cans as waste, and that the cost of foods alone amounted to about \$2.38 per week, or \$0.34 per day. This did not include service.

A recommendation was made to the board of managers that the plan of serving be changed and a strictly cafeteria plan be adopted. It was necessary then to put employes upon a so-called flat rate, allowing each one a certain amount for board which could be spent at the cafeteria or elsewhere. The rate fixed was ten dollars per month, and it was expected to cover only the cost of food and of labor.

This plan has been followed for some years very satisfactorily. If there is a large number of employes to be served, there are many advantages in serving them on the cafeteria plan. The first and most important advantage is that the responsibility of economy is placed on each individual. When a person feels that he is paying for each article he is more careful of waste than when he is paying by the meal. Upon the adoption of the cafeteria plan the amount of garbage which had been several canfuls per day, was cut down immediately to two or three canfuls. Another advantage of the cafeteria plan is that the individual taste may be catered to much better than under table d'hôte system. This does away with the most of the complaints that are common among hospital employes.

A great number of banquets are given at the sanitarium, and the menu of one banquet given last year by the students in domestic science is given here.

	Salpicon of fruit	
Celery	Radishes	Olives
	Cream of rice soup	Bread sticks
Nut meat loaf		Creamed potatoes
Cranberry sauce		Green lima beans
Buns		Breads
	Apple juice	
Apple and nut salad		Cocoanut sticks
	Pineapple cream dessert	
	Minute brew with whipped cream	
Total cost of materials.....		\$125.195
Cost of labor.....		\$110.25
Total hours of labor.....		565
Cost of foods per capita.....		\$0.397
Cost of labor per capita.....		\$0.35

This banquet was one of the practice meals prepared by the domestic science students. The number of guests was three hundred and fifteen.

FACTS DESIRED ON COST OF LAUNDERING

Miss L. Ray Balderston, instructor in Laundering in Teachers College, New York City, is making a study of relative costs of commercial and home laundering in various parts of the country. Readers of the JOURNAL can answer her inquiry with little personal inconvenience and are asked to do so.

Miss Balderston desires "assistance in securing copies of printed price lists from one or more laundries in each community, for regular goods for men and women, flat work, body work, etc., and any special rates that they may have for the family washing, "wet wash," "rough dry," or wash per hundred, per dozen, or per pound; in fact the prices which families must pay to get their laundry handled at the commercial laundry.

Also the wages of the laundress by the day, or by the hour, as she comes into the home to do the work. Is she usually given certain additional payment as breakfast or dinner or car fare? What is the usual charge for laundry sent to the home of some woman laundress per "wash," per dozen? Information as to both home and commercial work is needed, but the rates of commercial laundries are especially desired.

THE SCORE CARD FOR RATING EMPLOYEES

ANNIE DEWEY

Lake Placid Club

A list of traits of character, mind and personality which are desirable in the type of employes with whom we deal every day, easily runs over a hundred. Eliminating many synonyms, using positive rather than negative terms and endeavoring to make as simple a form as possible, the result is still a cumbersome card which does not apply equally well to all kinds and grades of helpers or to men and women alike. Certain traits which are important in some positions are of little value in others, yet it is very desirable to discover unusual qualities and to discharge, or promote and reward for service which is less or more than the average.

The *Autocrat of the Breakfast Table* explains that every human being is at least three distinct personalities. There is the real man, known only to his Maker, there is the man's ideal of himself and the ideal that others have of him. If applicants are intelligent enough to mark themselves, and heads of departments mark them later, according to results shown in their work, the employment bureau, controlling all engagements, may secure a fairer idea of the true value of services rendered. When the score or grade card is printed on the reverse side of the application blank, this one sheet, kept on file permanently will give concisely the record of each employe for a period of five years or as much longer as columns may be ruled.

However careful the grading on any such basis, there still remains that intangible, indescribable motive power, rate of vibration or spiritual key note with which every human being is endowed at birth. It is this invisible quality for which we most need a test. Doubtless some day science will give us a unit, comparable with horse power, calorie, and kilowatt, which will measure this ego-spark which is the mainspring of human action, which sets a limit to man's power and is the ultimate measure of his capacity. The possession of this motive power in any high degree demands health of body, mind and morals. Who will give us this unit, this test of man-power?

LAKE PLACID CLUB GRADE CARD

The purpose of this card is to discover and promote unusual efficiency. Work badly done is drudgery. Work well done brings pleasure and success.

\$1 is offered for each new suggestion submitted in writing and finally adopted which will improve service or lessen cost. \$10 will be paid for the most suggestions, above 5, submitted by one person and adopted. Coöperation of all employes is cordially invited.

BUYING, STORING AND HANDLING FOOD SUPPLIES

ANNIE DEWEY

Lake Placid Club

The food of primitive man was very simple compared with present day requirements. Since war-like implements were developed and fire and cooking were introduced, man has gone on surrounding his daily meals with increasing complexities until to-day practically every country and every climate contributes something to the tables of the prosperous in civilized lands.

We read that, in the days of Roman luxury, peacocks' tongues made a choice dish to tempt the palates of epicures. In my own girlhood days Point Shirley in Boston Harbor was famous for its game dinners and humming birds were sometimes served in English walnut shells as a special delicacy. The jaded palate today must be tempted by a great variety of foods and many of them are very perishable. Man's ingenuity, his inventive power, seem ever to keep pace with the demands made upon them and methods have been developed by which these perishable foods can be preserved, many of them for quite long periods so that, if temperatures are scientifically controlled, some of them are scarcely distinguishable from fresh foods. It is a sad fact that with this increase in variety and complexity of life, diseases seem to have increased in proportion and it is imperative that we go back to nature and a simpler life or our race will inevitably be replaced by a stronger and more rugged people.

Man, the human animal, eats from one to five times a day in different countries and climates, and in proportion to the number and variety of his meals must he depend on modern methods of preserving, preparing and serving his daily rations.

To-day a man who expects to build up successfully any large business or enterprise, must so organize and administer it that if anything happens to him, if he steps out, it can go on in the same general lines and with equally high ideals. A good administrator has been defined as "one who can so organize his work that he is not necessary

to it." There are few lines of business which require greater accuracy, skill and careful application of scientific principles than the buying, storing and handling of food supplies for large numbers.

This and the three following papers are not an attempt to give an ideal system but simply to show one way of dealing with the problem as it has been worked out at the Lake Placid Club. Others may have worked out better details in some directions and as a result of open discussion we should find a combination of the best methods to adopt as a standard or basis for further development.

An alphabetic list of addresses of all firms from whom supplies are bought, is kept on cards. This is supplemented by a dictionary list of names of each article so that one not familiar with the routine may easily see where any article needed has been obtained formerly, and the price. This includes all supplies bought by the store, other than food, such as disinfectants, laundry and housekeeping supplies, paper, etc. An index book in which is written the name of each article with prices for the different grades, has been used but this is being transferred to card index form also, as more convenient and easier to keep under revision as market prices vary.

The method of storing and handling the supplies is given in the papers that follow.

DAILY ROUTINE IN HANDLING FOOD SUPPLIES

S. C. MEIGHER

Steward Lake Placid Club and Royal Ponciana, Palm Beach, Florida

The most essential thing in handling large quantities of perishable foods during the summer months, is to have correct daily inventories. Each morning at 10 o'clock the head butcher and store-room man hand in the exact amount of meats, fish, fruit, and vegetables that are in the various coolers and necessary orders are sent, the amounts being governed entirely by the number of guests, the house count being sent daily from each kitchen. It takes about forty-eight hours from the time orders are mailed until the goods are delivered via national express either from New York or Boston and six hours from Tupper Lake where Armour and Company have a large distributing plant. Every Wednesday a refrigerator car comes direct from Chicago which supplies a large part of the heavier meats.

The most reputable firms are selected to deal with and printed lists

are received from them two or three times a week telling what they have to offer, and prices. All orders are made out in duplicate, one mailed and one retained for reference and to check supplies upon arrival.

All goods are inspected upon arrival and anything that is not considered up to standard is either deducted from invoice or claim filed against the express company for damages or delay.

With groceries and all non-perishable goods, inventories are handed in at the end of each week and orders mailed, all shipments being made by freight instead of express, taking usually from six to eight days from the time orders are sent until received.

The chefs of the different kitchens come to the store each morning and go over the stock on hand, deciding at that time what shall be used for the following three meals, being careful not to get any one article too often on their menus and at the same time trying to use anything of which there happens to be a large supply, in this way never overstocking and reducing waste to a minimum. Deliveries are made promptly after goods are put up and are stored in the smaller coolers and grocery space provided in connection with each kitchen.

Particular attention is paid to cleanliness and all storerooms and coolers are given a thorough cleaning and over-hauling twice a week; temperatures are watched very closely and are never allowed to vary to any great extent. Meat coolers are kept from 36° to 38°, eggs 40°, fish 28° to 30° and butter 34°. The temperature may be controlled down to 24° by means of extra pipes packed with ice and salt, making it possible to keep a large supply of meats and poultry indefinitely.

CONSTRUCTION OF COOLER AT LAKE PLACID CLUB

SIDNEY L. WOOD

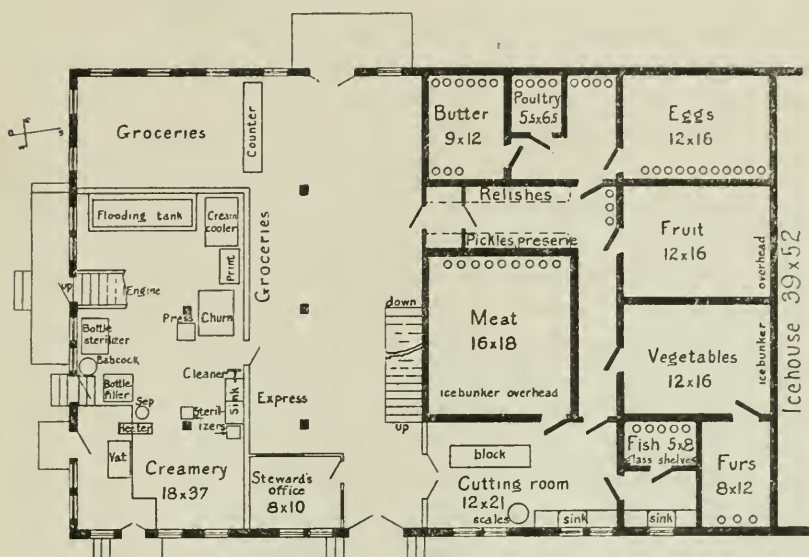
Supervising Engineer

The store cooler and ice house are side by side in a building 52 x 117, the 3 equal sections being each 39 x 52. The building is of frame construction, resting on a stone foundation. There is a cellar under the cooler but not under the other sections.

The insulation of walls, partitions, floors and ceiling in the cooler and ice house is effected by subdividing the thickness of these members into a large number of small air spaces. No asbestos felt, mineral wool or other non-conducting material is used in any part of this

building which now stores for 1500 people including employes and has ample capacity for 2000.

The construction of the outside walls is typical of the rest. On the outside of the studs (vertical members) is nailed the siding which in turn receives the shingles which form the outside finish of the building. On the inside of the siding, a strip of paper is fitted between each pair of studs. This paper is exceedingly tough and non-absorbent (C. S. Garrett & Sons, Phila., # 16). It is secured in place by long cleats nailed to the studs, the paper being turned up on each edge to go under the cleats and to secure a good joint. On the cleats are nailed short pieces



of board fitting tightly to the studs and to one another (ship lap). A complete air space is thus formed. A second strip of paper is fitted over these short pieces of board. A second set of cleats and a second set of short boards are also fitted, so that a second air space is formed.

This construction may be followed to produce any desired number of air spaces, six being used in interior partitions and seven for outside, including shingles. When the full depth of the studs is reached, the short pieces of boards are replaced by long lengths running over the inner face of the studs. Long lengths of the same paper are secured to this surface by cleats to which cleats another thickness of boards may be nailed, thus producing another air space. The verti-

cal extent of the air spaces may be limited by fitting horizontal strips wherever desired. Precisely the same method of construction is followed for interior partitions and for floors and ceilings.

Above the meat room and the fruit and vegetable rooms are fitted large ice bunkers in which perfectly clean ice is stored approximately 11 feet high. On each end of the ice bunker the partition is directly above the partition of the cooled room below; but on each *side* of the ice bunker a passage is formed for the air to circulate, the cold air down on one side and the warm air up on the other. On the warm air side, an insulated partition protects the ice from the rising warm air.

The space between the ceiling of the room below and the floor of the ice bunker is carefully insulated in the manner above described—as is also the ceiling over the ice bunker.

The floor of the ice bunker is inclined and is covered with a water tight pan which collects the water from the melting ice. Appropriate drainage is arranged to free the pan from this water. The size of these bunkers is such that it is generally necessary to fill them only twice a year, once in the winter when the year's supply of ice is stored, and once again in the summer, usually in August.

In addition to the ice bunkers some of the rooms are fitted with galvanized iron tubes, 10 inches diameter for holding a mixture of ice and salt. These tubes extend from the floor of the room to be cooled, through its ceiling where the upper ends are accessible in a room convenient to a large ice smashing tank from which the tubes are filled. Drainage from the bottom of these tubes is provided.

The temperature of any room is very easily controlled by the proper use of these tubes.

The store proper has, of course, no insulation, and it presents no feature of special interest. The first floor is the receiving and distributing point for all food supplies; that is, raw material; and on the second floor storage is provided for many supplies other than food.

The creamery is included in one corner of this store building and is fitted with appliances as indicated on the plan. To this creamery all the milk from the club dairy herds is brought for separation, bottling and distribution.

FOOD COST ACCOUNTING AT LAKE PLACID CLUB

OLIVE M. COSBY

Accountant

In the system used at Lake Placid Club, there are three main steps: calculating food used, counting guest days, and figuring the per capita. Each of the first two steps may be elaborated or simplified to suit the needs of the particular institution. We have six kitchens, each with its own table director buying from our own store, the latter being managed by the steward. Every kitchen has a requisition sheet, the color of which is significant to the initial letter of the name of its clubhouse, as lemon color for Lakeside, orange for Overlook, etc. After many years of experimenting, the division of foods into the following groups has been found most satisfactory, ranging from proteins and fats to carbohydrates: meat, poultry, fish, eggs, milk, cream, butter, fruit, vegetables and groceries.

Food used. The prices and the extensions are verified, each group of items being placed under its corresponding column and line on a sheet called *Steward's daily report*. At the end of one day we not only have the total sold to each kitchen, but also the total sold to each of the ten groups of food.

From the Steward's report is made the *Food used* sheet, containing the same ten columns, each kitchen having a separate sheet for each month. This sheet is divided into three ten-day periods, thus enabling the per capita to be reckoned each ten days of the month, 10th, 20th, 30th. The first line contains the amount on hand of each group followed by ten lines of food bought the first ten days, then a line for the total of these. In order to estimate the actual amount of food used, the kitchen inventory is taken every ten days.

Guest days. Each dining room sends in a meal count sheet recording each grade of meal served: guests $\frac{2}{3}$, children, maids and staff $\frac{2}{3}$, servants in side hall $\frac{1}{3}$. At end of ten day period the guest meal count may be converted into guest days. The actual meal count may be converted into guest days by proportioning each grade into guest meals, and dividing by three (three meals to one day).

Per capita. Dividing the total food used by the total guest days the ten-day per capita is reached. Each of the ten-day totals of the ten groups may be figured in this manner, their sum equaling the total per capita each month. The monthly per capita is figured not by

averaging the three ten-day periods, but by dividing the monthly total food used by the monthly total of guest days.

These per capita may be transposed in many ways for convenient comparison with previous months or the same period in previous years. After calculating the club per capita (by totaling the several kitchens) a graphic sheet may be made. Each food line has a characteristic color, as meat red, vegetables green, butter yellow, etc.; thus a chart of peaks or curves by ten-day periods may appeal to the eye of an uneducated chef when figures are meaningless.

THE GRADING AND STANDARDIZING OF FOOD SUPPLIES

F. S. SNYDER

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The grading and standardizing of food supplies is a very extensive subject. A few years ago it appeared that no study had been made in this country covering the subject of purchasing supplies of a variable nature. For example, even the two sides of a beef are not alike, nor of the same value. If the two sides of the same animal are different, and no two animals are alike, the infinite variety that must be covered in the question can be seen at once. A new era is dawning in the matter of meat food supplies for the United States. It was only a few years ago that this country was exporting large quantities of beef and other foods to Europe; it controlled the market in England; but seven years ago the tide began to turn and about four years ago American meats were completely driven out of the English markets by the meats from Australia, New Zealand, and Argentine. The changes in the tariff have turned the tide still further and some meats have been brought into this country through the eastern ports and have been shipped as far west as Kansas City. This portends something of very extreme and serious consequence. The changes in values in the last decade have been very great, and they are bound to be still greater. With the increased cost, the question becomes of very much greater importance than at any previous time, because if the waste percentage was worth, say the unit of \$1, and today that same value of meat is twice as great, of course the waste becomes of twice as much importance. Armour and Company closed up forty-three branch houses in the year 1913 because they did not have sufficient stock

purchased in this country to utilize them. The pressure of demand for the distribution of the produce was such that they needed to do this. Now there is insufficient supply even with the packing houses running. Therefore their cost of distribution is increasing and their over-head charges are becoming serious. The importation of this foreign meat is looked forward to with a good deal of satisfaction. Some persons from Argentine report that unless their country increases its supply, we shall make such demand on it that the prices will increase. Today the people of this country are enjoying a reduced price based upon the coming in of the foreign meat. The great bulk of the foreign meat is chilled, that is, it has been kept at a temperature slightly below the freezing point. If meat is frozen, the cells are expanded and become unnaturally red. Not everyone is familiar with the appearance of thawed meat, or with the character of the change that takes place, particularly in red meat. The aging process cannot be carried on in just the same fashion. Do your thawing out in your own refrigerators, because in that way you will avoid this chance for souring which is the natural and ordinary process of the development of frozen meats.

Lamb is being imported as well as beef, and shipments have been received from New Zealand, and Australia. Lamb has sold for seventeen cents per pound. This is a high price compared to the price of the lamb raised in the country, but this imported meat is said to be finer in quality. The second grade of this meat is worth about twelve cents per pound delivered at Boston.

Beef, lamb and veal may be divided into four general classes. Beef perhaps is of greatest importance in the matter of its uses. Let us consider the very concrete problems that relate to buying. In comparing two steers after dressing, one weighing seven hundred pounds, the other a thousand pounds, we find a very slight difference in the length of the animals but a great difference in the thickness. It is easy to see what that means with reference to the use of the sirloins, ribs or other cuts of meats where a surface cut of a given shape or size is being used. Sirloins are classified as "suet in," "suet out," and "Frenched," the latter meaning that the suet is removed and the flank removed. The weights of the Frenched sirloins from these two steers are almost precisely the same. The difference in the total weight is due to feeding and the difference in the feeding is registered in the suet so that if the suet is removed from these sirloins they have almost

precisely the same weight. With the difference in inches there is a difference of but about ten per cent, but in serving sections from this large loin there is a loss of at least thirty per cent. The importance of choosing the size of the sirloins is evident, and unless three sections are cut from a slice there would be given away a service which would mean a loss of at least thirty per cent in the cost. That principle also applies to the ribs. Comparing the twenty to twenty-four pound rib with the thirty to thirty-four pound rib, a difference of fifty per cent in weight shows a difference in length of but three-quarters of an inch. The difference in the first and second sizes is only two per cent in length, but twenty per cent in weight, so that the difference of eighteen per cent is a pure surface loss. This surface loss can be avoided by choosing proper sizes, as between the twenty to twenty-four and the thirty to thirty-four there is a difference of but seven per cent in length, and a fifty per cent in weight. The same principle applies in the purchase of lamb and lamb racks. Racks are quoted at this particular time of the year at five different prices. You have the eight to nine pound size which is under normal; the ten to eleven pound size in the normal range; the twelve to thirteen and the fourteen to fifteen. There is a difference here of about ten per cent in weight, and a difference in accurate usage and cost that is much greater. The first rack costs \$1.88; the next \$3.68. You serve precisely the same number of people from any one of these. Again you choose as to how many you will serve. If you are serving two chops, the importance of choosing a size of the sort that will make a difference of ten to forty per cent in the cost is of paramount importance. It is not what you pay per pound, but the size which fits your need and, what is of equal importance, the cut of the particular thing you are buying plus, of course, the general question of quality. Anyone handling meats becomes at least familiar with general quality, but the question of cut is infinitely more important than the question of price per pound. In purchasing lamb, find the size chops that you want, and remember also that the rack is one-third the weight of the lamb.

Further, in consideration of beef cuts we have what are called economy cuts of beef. This is an outgrowth of a practice in the West. The idea was to take fine cattle and make boneless cuts. A careful experiment was made by us in the use of these economy cuts with the result, in one institution trying them, that their cost had been reduced exactly one half, because they had been making the daily

mistake of purchasing a large percentage of beef which was too good for their use, and they were purchasing another percentage of beef which was entirely too poor. In this great institution with its staff of officers, they were using a great many sirloins which they did not have to use. On the other hand they were getting parts of the rounds of beef, an extra amount of bone and things of that sort. It was vastly better for them to buy bones at bone prices, but by purchasing a limited amount of sirloin for their officers' use, they found that no one had extravagantly good meat and no one had poor meat. It is the right selection of the particular thing for the particular need that should be studied. Go to some of the butchers and require that they serve you with the thing that fits your case. A few years ago Harvard was using rump steak, and was having a large amount of waste. When I suggested that they change to sirloin steak, the new steward held up his hands in horror, saying that they could not afford to. I showed him that they could not afford not to.

Passing on to sweetbreads we make seven groups. The chef can take a large sweetbread and cut it into seven pieces so that they fit any need that can occur in any well regulated kitchen. Lamb sweetbreads are almost precisely the same as beef sweetbreads in texture and flavor, and the cost is only one-third. Generally speaking, they are indistinguishable so far as the flavor is concerned.

Packers use two systems of curing—the dry and the wet. Take, for example, one hundred pounds of green meats, and by the dry system they can turn out eighty-five pounds of finished product, while by the other system they can turn out one hundred to one hundred and two pounds, so that in buying the finished product you are getting fifteen to seventeen pounds of water in one case. Of course, in the cooking a large share of that extra amount of water is evaporated. There is no way of knowing which kind you buy unless you cook two types and compare the cooked product with the original product.

Another thing which the government has not taken up seriously is the question of the excessive use of saltpeter. In New York and further west they use very largely the red corn beef. The excessive use of saltpeter is undesirable. The use of saltpeter and salt or any form of curing process is a modified form of tanning. We cure leather to make it tough; in curing ham and bacon we get the same results. The ordinary method of curing heavily with salt and saltpeter and then soaking is a common practice. Perhaps they could not do dif-

ferently in extremely large plants, but they need not go to the extent to which they do in some plants. Saltpeter is more serious in its effect than salt, but either an excess of salt or saltpeter during the process of curing, produces a less desirable meat from the standpoint of food use. Therefore avoid any meats that have an excessively high color.

In using olives where you want both quantity and quality get the very largest size of olives that is possible. A pound of large olives will contain less than one-half the pit waste found in the finest queen olives. Another illustration of extravagance is the use of oils. There is a great protest in many sections against using any of the neutral oils. There is no reason why certain of the refined oils that are now made from grain, cotton seed, and peanuts are not entirely wholesome, and you will find that as compared with the olive oils, from Spain especially, these oils are better and cost about one-third as much. Buy the finest French or Italian oils and mix with cotton seed oil, and you will find your working qualities much better. The French oils are heavier and a little richer, and do not blend quite as readily as the Italian. The average American prefers the French oil.

In a certain institution they are paying ten and one-half cents for certified milk, and thirty-six cents per pound for butter. In a forty quart standard can that weighs eighty-two pounds, forty quarts at ten and a half cents would cost \$4.20. If it contained a four per cent standard of butter fat that would make 3.28 pounds of butter fat in the can of milk; at twenty per cent surplus for the casein and the water content that will be incorporated in making it into butter, it would produce 3.93 pounds of butter. So that amount of butter multiplied by the price per pound would be \$1.41. That is, the cost of the milk was \$4.20 to turn into butter, and the butter would cost \$1.41 made from the same milk. In other words, they are paying a dollar a pound for the butter that is in that milk. The usual practice is to get an unnecessary price for cream. It is something that is being used more every year, and what has been equally remarkable is that the cost of cream has been maintained in the market. There is not a sufficient justification for it. Cream can be shipped from northern Vermont to Boston, and if there is any surplus it can be turned into butter. There is no reason why cream should bring the high price that it does. It is simply trade practice.

LAKE PLACID REPORTS AND INSTITUTION PAPERS

Those who wish the papers that have been given at Lake Placid Conference and at meetings of the Institution Economics Section at Lake Placid and elsewhere may obtain them from the office of the American Home Economics Association, Station N, Baltimore, Maryland, at the prices quoted.

The following is a list of reports and JOURNALS containing the papers referred to above. A few of the important subjects are given for each.

LAKE PLACID CONFERENCE PROCEEDINGS

*1899-1901—History and outline of first conference, Suggestions for professional school of Home Economics, Courses in Home Economics for elementary and secondary schools and colleges.	\$2.00
1902—Industrial institutes, Social conditions and family life, Courses in Home Economics.	1.00
1903—Personal hygiene, Manual training, Relation of Home Economics to other studies, Labor problem in the home.	2.00
*1904—Household labor, Cost of living for family and for large numbers, Standards of wages, Personal hygiene.	2.00
1905—Teaching Home Economics, College and university education in Home Economics, The food problem, Household industrial problem.	0.50
1906—Euthenics in education, Progress in teaching Home Economics, Food and nutrition, Public health.	1.00
1907—Woman's public work for the home, University work in textiles, Essentials of coöperation.	0.50
1908—Hygiene and sanitation, Requirements of the modern house, Study of textiles, The school lunch room.	0.50
Papers from the administration section June, 1912—Laundry, school lunch, accounting systems, diet.	0.50

JOURNALS

Vol. 11, No. 5 (Institution number)—Institutional management, Administration of dormitories, Organization and control of institutions, Accounting, Laundry.	0.50
Vol. IV, No. 1—Equipment of kitchens and dining rooms, Insect pests in institutions, Scientific management, Purchasing and handling supplies.	0.25

* Those marked with a * are so nearly out of print that they can be sold only in orders for a complete file of the reports. 1901 can be furnished by itself for \$1 and contains most of what is found in 1899-1901.

Vol. IV, No. 4—Marketing facilities, School lunches, Laundry, Institutional management.....	\$0.25
Vol. IV, No. 5—Dietaries, Diet kitchen, Public utilities, Uniform and waste accounting.....	0.25
Vol. V, No. 1—Commercial laundries, Penny lunches, Café in men's clubs.....	0.25
Vol. V, No. 5—Standards of living, Organization and rewards, School dietitian.....	0.25
Vol. VI, No. 4—Laundry, Lunch room supplies.....	0.50

EDITORIALS

Institution Economics Section Meeting. The Institution Section of the American Home Economics Association will hold its annual meeting at the Lake Placid Club, Essex County, N. Y., from June 26 to 30, 1915.

The program of each day will consist of a morning and an evening session devoted to the discussion of problems of administration. The cafeteria, the school lunch-room, the hotel, and the school and college dormitory will be represented, and contributions will be made from the experience of the Young Women's Christian Associations, coöperative housekeeping for student groups, lodging-houses for working women, and state institutions. Two sessions will be given to the study of housing problems affecting the women workers in our cities. Consideration of the field assigned to the dietitian of today will occupy one session, and the practical experience of hotel managers, per capita costs in various institutions, service, equipment, and the buying of supplies will be fully discussed.

Ample provision for group conferences will be made, in which the specific interests of the various types of institutions may be considered.

If you are interested in any institution or if you are teaching Home Economics, you should avail yourself of the advantages offered by this meeting.

Chairman, Institution Economics Section. In 1913 Miss Sarah Louise Arnold resigned from the chairmanship of the Institution Section of the American Home Economics Association in view of more responsible duties placed upon her as president of the American Home Economics Association. Miss Martha Van Rensselaer was elected chairman of the Institution Section in Miss Arnold's place. At the Cleveland meeting in the summer of 1914 Miss Arnold declined reelection to the presidency of the American Home Economics Association, and Miss Van Rensselaer was elected president. Accordingly a reversal of the original plan took place and Miss Van Rensselaer resigned as chairman of the section and Miss Arnold was again elected chairman.

HOUSEKEEPERS DEPARTMENT

WHAT THE HOUSEHOLD HAS LEARNED FROM INSTITUTION METHODS

Our debt is great and promises to be greater as we learn more of these methods and test and apply them to the every day use of the smaller group. The institution is but the larger household and in reaching conclusions as to the efficiency of methods in all of the lines of household management it has certain advantages that insure for it leadership.

On the financial side. The household has been a law unto itself. Its manager has other functions besides that of house management and they are important ones, of great social and educational value. They may even obscure in her mind the importance of time and training which should go to the practical running of her household. She is responsible to her husband only and he may or may not be a good critic of the efficiency of her methods. On the other hand, the head of an institution is first and foremost a thinker and a worker along these lines and responsible to a board of managers who in turn are responsible to the public for the use of funds. The methods in use must be the best attainable, they must have passed criticism and comparison with those of other institutions. Their results are not hidden, they are constantly in evidence on the pages of the account books. From the institution we have thus learned the absolute necessity of keeping accounts in order to know whether we are spending our income with economy. Imagine the matron of a hospital facing her Board with this statement found very amusing in a young housekeeper, "When the housekeeping money is gone, why it's gone and that's all there is of it—we have to live on mush till the first of the month." In times of business depression, the certified public accountant reports that he is busier than ever. A business man wants to know whether his methods can be improved and calls in the accountant to look over his books.

Hours of labor. The institution must have an exact understanding with its employes as to hours of labor. Those hours may be 8, 9, or

10 a day, but they begin and end on the minute, a system so agreeable to the worker that the housekeeper finds to her amazement that many a girl prefers hard work in a hotel to the easier work extending over uncertain hours in a private house. Will these industrial competitors force us to shorten and make definite the hours of work in the household even though it may necessitate our getting the family breakfast ourselves?

System in buying. A woman who served on the board of a child's asylum found that all purchases are made by institutions at wholesale by the system of samples and by competitive bids; the competing firms submit their samples of food, clothing, blankets, and other house furnishings to the buying committee. These samples are carefully tested; for instance, a decoction of the samples of coffee is tested by a number of people. When the orders are filled, the foods must come up to the sample as to quality and be of the guaranteed weight or they are returned. In comparison the household system of buying seems a very poor one. The great difference between the wholesale and retail price paid by the household ought to guarantee besides delivery of goods in small quantities exactness as to weight and quality, but does it?

Test of utensils, house furnishings, etc. It was the institution which started the use of bare floors with rugs, and brought about the use of the concave joining of mopboard and floor and the filled-in corner, all for hygienic reasons, and slowly the household has followed suit. The tiled bathroom was first approved by the hospital and it is the hospital that has made experiments to determine the best floor covering.

Laundry. Only in the large institutional laundry is there an opportunity to test out laundry methods and machinery. Few housekeepers, for instance, could duplicate the following test: In a certain hospital 12 collars were given out to each nurse and expected to last for a year, but when the laundry was changed to one using destructive chemicals, these 12 collars were worn out in three months.

The laundry departments in our schools of household arts, starting with appliances and methods suited to the institution, have worked out what can be used in the individual home.

A RARE BOARDING HOUSE

ELLA KAISER CARRUTH

Situated in the midst of a choice residence section of one of our largest cities near a thriving university is a boarding house which is unique.

The problem of serving good, homelike, abundant meals at a figure lower than similar meals could be served at a private home has been solved. For a family of three whom boarding relieves of the necessity of employing a maid, the following is a roughly estimated comparison of prices for the same meals for one week at home and in the boarding house.

Cost in the home

Cost of food.....	\$15.00
Cost of fuel.....	.50
Maid's service.....	2.50
Maid's waste.....	.70
Laundry of table linen.....	.35
Total.....	\$19.05
Cost of boarding for three.....	18.00
Balance per week in favor of boarding.....	\$ 1.05

To the cost in the home should in reality be added the wear and tear of equipment and the time given to oversight by the housekeeper.

At this boarding house no pretence of giving meals at an absurdly low price is made although the following price list indicates rates from a dollar to a dollar and a half less a week than prevail in other boarding houses setting similar tables, in the same section of the city.

Board per Week

Three meals per day.....	\$6.00
Two meals per day.....	5.00
Dinners only.....	4.50
Reductions made only for absence of one week or more.	

Single Meals or Guests

Breakfast.....	\$.50
Luncheon.....	.35
Dinner, weekdays.....	.75
Dinner, Sundays.....	1.00

No supper is served on Sunday or holiday evenings.

The better to appreciate the spirit and atmosphere of this boarding house home, which mean so much to the patrons, a glance at its history and surroundings may be of interest before examining its machinery. Nearly a century ago the grandfather of the present owner bought a farm far out from a struggling village in the middle west. As recently as fifteen years ago his acres were on the very outskirts of the city. But now the farm has been pierced by city streets. Much of the land has passed out of the hands of the family but a choice and very deep corner lot still remains on which a large and comfortable home was built about thirty years ago. Well back from the street it stands, surrounded on all sides by expansive lawns and sheltering trees.

Some ten or twelve years ago, the owner allowed ten or fifteen people to room in the house. Rather reluctantly she also arranged to board them. The board was superior, the location ideal, the hostess charming and personally acquainted with and interested in her guests. The refined atmosphere of the place made it a haven of delight to the privileged few.

Presently another house was required to accommodate even a part of the people who were clamoring for admission. And they were just the kind of people for whom the owner wanted to provide a home—young professional and business men and women of moderate income accustomed to culture and refinement and unostentatious living.

The fame of this home spread, and more people wanted to come. If circumstances had necessitated the giving up of their own home, where could a family live better, than here where they could enjoy the privacy of a table of their own?

Then the barn was made into a delightful little cottage. Two or three houses were converted into rooming houses for the boarders. A three story brick apartment house, having two and three room suites was built on part of the garden. All the suites were engaged before the roof was on. And now some facetious boarder has said, "Only death or marriage leaves one vacant." Prices for suites in this building are: \$25 per month for two rooms and bath; \$30 for two larger and front rooms and bath; \$35 for three rooms and bath. All tenants pay their own light bills, and many of them supply their own furniture.

The present seating capacity of the dining room is one hundred and

twenty-five. This one hundred and twenty-five includes an interesting lot of people. Teachers of all kinds, from kindergartners to college professors; "More kinds of librarians than I knew existed" some one said; business men and professional men of the bachelor persuasion and men of families. To some elderly ladies left practically alone this happy, congenial home seems more of a boon than to almost anyone else.

The service in the dining room is all rendered by students from the neighboring university, who wait on the table in return for their board. They do their work quickly, quietly, politely and efficiently. By using the card-index system, the head waiter keeps track of the absence of regular boarders and of the number of guests they entertain. The price of all guests' meals is added to the proper bills.

The other waiters so systemize the work that no time is wasted and yet there is no feeling of haste. Since one waiter has charge of the soup and the drink (tea, coffee or milk) and another of the main course and dessert, two waiters can serve several tables. And only ten waiters are ordinarily required in the dining room.

The color scheme of the dining room is green and white from dishes to wall paper, and is very restful. The table linen, always changed three times a week and oftener if an accident occurs, is as fine as is consistent with durability, and is always well laundered. The silver is always bright, the salt cellars always full and *flowing*, the water cold and the cream yellow.

The following menus, selected at random, are typical of the meals served:

WEEK DAY MEALS

BREAKFAST

Cereal			Fruit		Cream		Toast
Creamed	chipped	beef	Brown	potatoes	Graham	muffins	
	Coffee		Postum		Milk		

LUNCHEON

Minced chicken in gravy on toast			Candied sweet potatoes		
Succotash			Rolls		
Chocolate pudding	Sliced peaches		Cake		
Tea (hot or ice)	Milk	Cocoa	Postum		

DINNER

Chicken broth				
Roast beef	Mashed potatoes	Tomatoes	Mashed squash	
	Tea	Coffee	Milk	
Apple pudding and hard sauce				

SUNDAY DINNER

Cream tomato soup			
Fricasseed chicken	Sweet potatoes	Succotash	Cucumbers
	Tomato salad, French dressing	Ice cream and cake	
Coffee	Tea	Milk	

Few choices are given, but well balanced palatable meals are prepared in the kitchen. Eggs may always be substituted for meat and an orange for the dessert. On Friday there is always a choice between meat and fish.

The genius who plans the meals and does a large part of the marketing is a capable, cultured woman. She buys the best of everything. She, with the hostess and another charming woman who keeps the books, make up what might be called the Executive Board of the establishment. Under their direction the cooks, the maids, the butler, the gardener, all do their work.

An old black cook, the backbone of the establishment, presides over the kitchen. Although all her cooking is unusually good, she excels especially in the preparation of vegetables.

The four or five maids help in the kitchen, do what laundry work is done in the house (and this includes all the table linen), wash the dishes and care for the rooms of the bachelors. The women tenants provide for the care of their own rooms—they are not as yet wholly emancipated.

No expense is spared in equipping each department with the really labor saving devices. During the past summer an iceless refrigerator plant was installed. Vacuum cleaner, washing machine, mangle, and dish washing machine have all been installed as rapidly as they were perfected.

The very marked success of this boarding house is due primarily to the unusual personality of its hostess. Still the financial success of an institution can hardly be attributed to so elusive a thing as a personality. The question still arises, what makes it possible to provide such excellent fare for so reasonable a price. The answer is six fold:

1. In common with all boarding houses a large part of the profit must come from the renting of rooms. The practice of having practically all the tenants furnish and care for their own rooms adds materially to this profit.

2. Again, in common with all large boarding houses, is the opportunity for saving which comes from buying in large quantities.

3. No wages are paid to the waiters. They are given only their board.

4. The owner has an ability amounting almost to genius for finding just the right person for each bit of work.

5. The number of servants employed is greatly lessened by the installment of practical labor saving devices.

6. The boarders are given very few choices in their meals.

A MODEL WET-WASH LAUNDRY

The small house or apartment has seldom any proper facilities for doing the family laundry. In a canvass of two blocks in the East Side District of New York it was found that in one of them 40 per cent and in another 59 per cent of the families were without wash tubs. Great relief has been afforded by the municipal wash houses, fifteen of which have been established in the last few years in connection with the public baths in our large cities. Here the man or woman may do a family or a personal washing and ironing at cost price, by the use of a simple and inexpensive outfit.

But a great advance on this method would be the general establishment of wet-wash laundries where work may be done by machinery at cost price. Under the direction of The Association for Improving the Condition of the Poor, such a one has been in operation in connection with the Milbank Bath in New York since the middle of November last. It uses a washer of eight compartments, each compartment holding a family washing in its own bag. For 25 cents, 30 pounds of clothing are washed and partially dried, and returned the same day within a radius of 6-8 blocks for an extra charge of 10 cents, or the family may bring the washing and call for it. At present the number of family washings done per week averages 275.

If this method of public service proves to be a success, as seems probable, we may expect the municipal wash house to extend its scope or to improve the methods and lower the prices of the commercial wet-wash laundry.

COMPARISON OF THE COST OF HOMEMADE AND BAKERS' BREAD

The following conclusions are taken by permission from the published report of an experiment conducted by the Boston Branch of the Association of Collegiate Alumnae and the School of Housekeeping of Boston.

The work was done fifteen years ago and certain adjustments as to prices and conditions are necessary to make it of practical value today. But the results should be carefully preserved, as the work was done with the utmost accuracy and care under a fellowship established by the Collegiate Alumnae at the School of Housekeeping, in 1900.

To compare the cost of food cooked out of the house with that of food prepared at home, the following data must be obtained in regard to home-cooked food: cost of materials, cost of labor, cost of fuel, cost of wear and tear on equipment and of waste.

Cost of Materials. This is the simplest of the four problems involved and can be determined with comparative accuracy. The prices used in the following experiments are retail prices of the better-class dealers in Boston.

Cost of Labor. This is an item extremely complex, first because there exists as yet no standard of the value per hour of labor in housework, and, second, because of the difficulty of determining the exact amount of time required to prepare any one article of food, since in practice, the person cooking usually does not give her undivided time to the preparation of this one article, but is cooking other things at the same time, with a consequent economy in time. The price adopted was $8\frac{1}{2}$ cents an hour, based on a wage of \$4 a week.

Cost of Fuel. In the absence of obtainable data on the comparative cost of different fuels, an approximate estimate of the cost was found by using, as a standard, coal at \$6.25 a ton, coal oil at 15 cents a gallon and gas at \$1 per thousand cubic feet. At these prices, oil cost 4.58 per cent, and gas 27.69 per cent, more than coal.

Cost of wear and tear on equipment and of waste was omitted from the calculation as it was found impossible to arrive at any satisfactory estimate.

It is significant of the lack of business management in housekeeping, that no house manager was found who could give an accurate statement of the cost of wear and tear and waste. The fact that these items must be disregarded in the present investigation, because of lack of data, is indicative of the present unorganized condition of house-management.

RESULTS

The average cost of producing one pound of bread, including the cost of materials, fuel, and labor, is 5.865 cents. The cost of one pound not including labor is 3.72 cents. The cost of one pound not including either labor or fuel, but simply the cost of materials, is 2.942 cents.

The cost of a pound (not loaf) of bakers' bread is 5.55 cents.

CONCLUSIONS

The cost of bakers' and home made bread does not differ materially when the housekeeper counts labor and fuel in estimating the cost of making the bread at home. But when the fuel would be burned in any case, and the heat is available for baking bread without extra expense, that item should hardly be counted in the cost. Again, when labor is hired by the week, as in the case of the cook or general houseworker, the time of the worker is available for bread making, and does not mean a loss of time which could be more profitably employed. Hence, the item for labor may in these cases be eliminated. Taking out the cost of both labor and fuel, only the cost of materials remains. This averages 2.942 cents per pound of bread, and may be reduced to about two cents. Under these conditions it would evidently be much cheaper to make bread at home.

On the other hand, in cases where the housekeeper's aim is to put out of the house as much work as possible, the reduction of service secured by buying the bread might prove an important element in reducing the expense for labor. Provided a satisfactory article can be secured it would probably be economical to buy it ready made.

SELECTING ECONOMICAL FOODS

The housekeeper who wonders at every rise in the price of meat, will find an explanation with many other important points as to the cost of food, in the paper by Mr. F. S. Snyder, in another part of the JOURNAL. The article is full of information that very rarely finds its way to the housekeeper.

THE Journal of Home Economics

For those interested in Homemaking
Institution Management, and Educational Work in Home Economics

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Little Homemakers in the Hiram House Model Cottage. (See page 185)

THE Journal of Home Economics

VOL. VII

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THE VISITING HOUSEKEEPER

INTRODUCTORY NOTE

M. ADELAIDE NUTTING

Professor of Nursing and Health, Teachers College, Columbia University

When we commit ourselves more fully to the principles of prevention and of conservation, it will lead us to look for new ways of reaching into homes and families before, through long mismanagement or disability, a climax has been reached which compels them to seek outside interest and aid. We are unhappily conscious that many of the misfortunes and extremities with which we are obliged to concern ourselves might have been averted, had there been any way of finding out the particular conditions which were working inevitably downward and toward a crisis. When that stage is reached, our hand is outstretched, we are anxious to help in all available ways, and we have taken the trouble to train groups of workers, visiting nurses, relief agents, tenement inspectors and others, all of them social workers, who are ready and able to answer in their own special ways the calls of those in need, whether the trouble be sickness, destitution, or other pressing and unendurable conditions.

Most of these workers would probably agree that a good many of the problems with which they deal are, if one goes back far enough, due to ignorance, and that a fairly common factor in the general situation, one to be reckoned with pretty constantly, is the untaught mother.

Mrs. Florence Kelley in discussing this question makes her a very large factor. She says:

Intemperance, infant mortality and the reduced vitality of working class families are problems with which under a vast variety of forms, modern philanthropy struggles. All three are due in large measure to unskilled mothers.

I suppose most of us see that mother contending with a good many things besides her own ignorance: the saloon, the landlord, the employer, the milkman and grocer, and a bewildering complexity of other elements seen and unseen; elements of a kind, indeed, against which even the most astute may find themselves helpless. Now there appears to be nothing in civilization much more beloved, or more highly prized, than a good home, and we would probably at present agree that without good homes we cannot have a good state. And there is evidence to show that good homes are not entirely controlled by material conditions, that they can be maintained in poverty as in riches. Pictures are indeed before us of households where under similar conditions of housing, of income, of family needs, one will be wholesome, happy, thrifty and well-governed, and the other will be disorderly, unclean, unhappy and demoralized. The difference appears to be due generally to intelligent direction and skill in the one instance and to ignorance and lack of skill in the other. It appears to be obvious that we cannot hope to improve conditions without the coöperation—the intelligent coöperation—of the mothers and homemakers of the country. The mother can, if she will, set at naught the best safeguards that we may devise, but she will do so not through wilful neglect, but through ignorance and helplessness.

The belief is, therefore, growing that a way should be found of reaching and teaching such mothers and homemakers in their homes. The expert from the institute helps the farmer by lecturing in his farmyard. The expert should also be found to help the mother by teaching her in her home, in her kitchen, that crowded and cramped little laboratory, presided over often by dense ignorance, by loving and faithful incompetence, yet charged with the extraordinary task of providing the very sinews of life. There are thousands upon thousands of homes which are unfit to be called such, in which children cannot be brought up healthily and happily with any hope of right growth of mind or morals; homes in which adults cannot live decent lives, and it seems to be a part of our proper business to find a way of establishing and maintaining better standards of life in them.

We should be able to do in some measure for the inside of such homes what we have long accepted as quite right and natural for the outside of them. To have homes which are fit to form part of a self-respecting state, there must be some sort of guardianship over them. Some one should be provided, trained and paid, whose business it is to reach, if necessary into every home, to inspect, to discover, to advise and to teach. Public service of some such nature seems to the writer as necessary as that we should have a force to clean our streets, and remove our daily refuse, to keep our streets safe for traffic, to protect us from fire and to inspect our food, milk, markets and our tenements. The need of some such worker was discussed with Mrs. Richards; her province, her methods, her preparation, even the title which she might use was considered. The suggestion that the term in use in England of "Health Visitor" for a somewhat similar body of workers found favor. The term "Home Economist" was mentioned. Mrs. Richards often spoke with enthusiasm of the instruction given in homes by Visiting Nurses, as pointing the way for our endeavors in this direction. Her paper on "Instructive Inspection," republished in this number of the JOURNAL, embodies some of her ideas on this subject.

Within the last few years some interesting and highly valuable efforts have been made to carry such education into homes. Miss Winifred Gibbs, who began some years ago as Visiting Dietitian of the Association for Improving the Condition of the Poor has done pioneer work in this field, and has clearly demonstrated its value. She has had the satisfaction of seeing the work develop in various ways and extend into other cities. Miss Winslow, whose report appears in part in this number of the JOURNAL, has been gathering material on this subject, and finds that such workers, usually under the title of Visiting Housekeepers, are found in about twenty cities or towns. Four are employed by the Associated Charities of Chicago. It appears further that the results of their work have been uniformly recognized as highly important, and its expansion generally urged. Miss Winslow finds that Visiting Housekeepers are being used by: Charity Organization Societies throughout the country; in connection with the administration of the Widows' Pension Act (Illinois); by Settlements; by Visiting Nurse Societies; by Hospital Social Service Departments; in Welfare Work, especially in mining towns—now carried on by the U. S. Steel Corporation, and the Guggenheim

interests; in Rural Extension Work—now being tried in New York, North Dakota and Massachusetts.

One of the most encouraging aspects of the work is the eagerness of many of the mothers to learn. Just how a plan can be worked out which will carry instruction into every home that needs it, it is not easy to determine, but one catches a glimpse of possibilities in finding the admirable work which Miss Kittredge has done in her Housekeeping Centers now being related to the Public Schools. During the last year, two of the Public Schools have coöperated with these centers by sending groups of pupils in rotation for systematic instruction in housekeeping. The extension of the work of these centers, which would carry special members of the teaching staff into the homes, might be worth considering and worthy of trying out as an experiment. But the teacher in this new field has a peculiarly difficult and important task and needs special training. The ordinary preparation for the teacher of domestic science in schools is not wide enough. A good groundwork in economics, more study of housing and sanitary conditions and of industrial problems are needed. There is also needed some social training. Such a worker must bring a definite and usable contribution to her task.

INSTRUCTIVE INSPECTION¹

ELLEN H. RICHARDS

The checking of wastes of all description is much in the air but there is less discussion about waste of effort than might be expected. Yet effort means time, and saving of time saves lives as well as money.

Nearly every investigation of sanitary evils leads back to the family home (or the lack of one) and a great deal of the health authorities' work is saving at the spigot while there is a hundred times the waste at the bung hole. The medical inspection of the schools was found to have little effect without the visiting school nurses, for the parents did not know how to better conditions and in the majority of cases did not believe in the need.

¹ Read before the American Public Health Association at Richmond, Va., October, 1909. Reprinted from the *American Journal of Public Health*, 20 (1910) no. 3.

Such experience should give the health authorities a cue. Rules and regulations should be enforced, but enforced with instruction as to the means of doing it. The *why* is not so easily understood as the student of sanitary science seems to think. Germs and microbes are empty air to the street urchins until they have been shown on a screen in a lecture hall or until cultures have been made in the sight of the children in a school room. One whole school district of intelligent parents was converted, many years ago, by giving the children in one class two Petri dishes each with sterile prepared gelatine, with directions to open one in the sitting room while it was being swept, and two hours after the room had been thoroughly dusted to open the other in the same place for the same time. These "dust gardens" as the children called them took the place of the family album for callers, and spread knowledge.

Hundreds of similar experiences should convince any intelligent earnest board of health that a teacher by nature or training should be in their employ to be sent *with power* like any other inspector, wherever ignorance—usually diagnosed as stubbornness—is found.

The health officer whose mother was a good housekeeper, not afraid of work, has no idea of the attitude of half the housewives of his district. Having been made as a boy "to get the dustpan and brush and sweep up his whittlings," he does not realize that these houses in the tenement district have no dust pans and that no one would bend his back to sweep up litter if there were. It is all swept into the alley or the street. Cheap, long-handled dustpans would be valuable sanitary implements. As has been elsewhere suggested, the garbage question in the tenement house needs study and must be solved by a practical housewife. There are such, and boards of health are wasting effort and the town's money until they avail themselves of their help in the enforcement of their rules.

All health boards use the strong arm of the law, that is, a police inspector's club to drive the ignorant and careless householder to keep his premises from becoming a nuisance. The newly-arrived, prospective citizen, or more often, citizeness, fails to understand what it is all about—neither the words nor the pantomime convey an idea, except that this country is topsy-turvy anyway, for everything is different in this new land.

In the process of learning what not to do, the dwellers in the alleys flee when the health officer appears and oppose a stubborn indiffer-

ence to his threats. When his back is turned, matters go on as before and nothing is gained, but an opportunity is lost.

Law is a potent educator when rightly applied, but it may work more harm than good. Rules of action clearly explained are soon accepted—like traffic rules, notification of contagious diseases, disinfection, etc. The placing on the force of each town of at least one specially trained “explainer” would result in cleaner backyards and less illness and, better than all else, a more friendly feeling between the officials and those they honestly wish to help.

It is beginning to be thrown in the face of sanitary authorities that the laboratory wisdom does not reach the street; that there is not enough, nor rapid enough, improvement in general conditions. Newspapers are ready, for the most part, to disseminate information, and benevolent societies write tracts, but we must remember how little *words* mean—especially printed words—to those unaccustomed to acquiring information that way.

The actual showing in an alley of the process of cleaning up; the going into a house and opening the windows at the top and tacking on a wire netting to keep out the flies; the actual cleaning of the garbage pail, perhaps, or at least the standing by and seeing that it is properly done—all such actual doing, even if it is done only in one house on a street, will spread the information all over the neighborhood.

One of the most helpful offices is to tell the woman where she can get the special article needed, and what it will cost, and to show her the thing itself, in a friendly spirit. Such visits would soon revolutionize the sanitary condition of any community.

Villages need this help even more than cities, because they have fewer chances to know about inventions.

There may be races, as there are individuals, whom persecution drives to progress—who do find means to execute unjust commands—but the people a health officer has to deal with can be better led by kindness and will learn from teachers, if the teaching is in the form of example or demonstration.

It is an incontrovertible fact that to hasten sanitary reform, it is only necessary to hold out the helping hand; to encourage the ignorant citizen to ask for instruction and direction, instead of placing upon him the task of making bricks without either clay or straw. There are times and seasons, and individuals, at which, and on whom

the bludgeon must be used—the greater good covering the lesser evil—but such cases are less common than present practice would seem to indicate.

The tenement house mother who has only one pan for all her cooking and one broken pitcher for all fluids, does not really understand why she must keep her milk bottle for milk only. Who is to tell her, so that she will understand?

The men may be shamed into cleaning up the back-yards and alleys by pictures of such conditions in contrast to what might result with a little effort. The famous Cash Register yards were started in this way. Neglected spots have been cleaned up all over the country by similar influences. Why does not the health officer take a leaf from this book of recorded good work and show conditions known to him? Is he afraid of hard words from the owner? He will have the approval and support of all good citizens.

Health board regulations may be left at a house after they have been explained, and a firm insistence on obedience may then have an effect.

Why should there not be a constant exhibit of the conditions found within the boundaries of the district, with the changes for the better indicated as soon as they occur.

The health board office is now in some out-of-the-way place, where few people ever go and where those who do go are frequently not welcomed. Has the board ever asked itself why it is often so misunderstood, so hampered in its work? What board will be the first to take an office on a busy street and put pictures and samples with clearly printed legends in the windows: examples of the evasion of the plumbing laws on a T-joint pipe; photographs of a dairy barn; photographs of a street at daybreak, showing the few open windows, and the one or two, if any open at the top—these would serve as texts for the newspapers' sermons, sure to be preached, and back-alley conversations thereon. Why not? Rival water companies are allowed to show filters to prove their claims.

The basis of all successful sanitary progress is an intelligent and responsive public.

The problem is to visualize cause and effect to the ordinary individual, too absorbed in his own affairs to study out the principle for himself.

The success of the street cleaning brigade, tried for one season in Boston; the improvement in the condition of parks wherever receptacles for wastes have been placed; the tidy condition of corner lots where civic improvement leagues have taken the matter up with the children—all point to a means neglected by the officials, and hence to wasted opportunity and delayed obedience to regulations.

For the position of instructive inspector, it goes without saying that a trained woman will be worth more than a man, since most of the regulations affect, or would be controlled by women. But that a gain in the speed of adoption of sanitary reforms would be comparatively rapid under a thoroughly qualified woman as instructive inspector, and that there will not be any great gain until such a measure is adopted is the firm belief of the writer.

Mrs. Wagner's work in Yonkers, begun in 1897 under the Civic League, is well known. After three years' trial the Board of Health established her in the position of Sanitary Inspector. Her work in the tenement districts has been most successful. Several other cities have followed the example of Yonkers, but the practice is by no means general. Yet there is no doubt that it would add efficiency to any board of health.

The most recent experiment was the employment, the past summer, of an inspector provided by the Woman's Municipal League of Boston, to inspect, and devise means for bettering conditions in a district of small shops where food is sold. This district had been found by the Market Committee of this organization to be in need of such help. The person chosen was a graduate of the School of Social Workers, who carried on her campaign with the spirit of helpfulness fostered by her training. She was given a badge by the Board of Health, who have been most sympathetic and cordial in their support. The experiment has been justified by the results and especially by the reception accorded the inspector by the people of the district. It has proved that there is a responsive desire to fulfill the law wherever its provisions are understood.

Inspection cannot fulfill its purpose until it is instructive. Man and the law will be in accord when the benefits of the law to man are appreciated. It is incumbent upon the sanitary authorities to see to it that their efforts are not wasted on inert, partially hostile people.

THE WORK OF THE VISITING HOUSEKEEPER¹

FRANCES STERN

Visiting Agent of the Boston Provident Association

A scientist has lately published a lecture in book form, "so that educated people may derive a better understanding of the principles of nutrition than is to be had from current popular writings."

Much has been written to be read, but what of the individuals who cannot receive this message—the busy, tired mothers, limited in knowledge through no faults of their own, having been set to work in their early years, or having come from lands where the common education is not established?

A new type of teacher is attempting to help the mothers in the tenements, to increase and sustain the well-being of the family by teaching them through example what our scientist has set forth in word and letter. She has a variety of titles, chosen by various associations. In Boston she is known as Instructive Visiting Housekeeper.

Can the Visitor convey this knowledge to the housekeeper who is ignorant rather than intelligent; feeble-minded rather than alert; lazy rather than vigorous? No doubt she can if the lessons are very concrete, consisting of the actual doing of the thing she wishes to teach. Often one has to go with the mother to buy the food, then return and prepare it, and further, if necessary, stay to the meal to eat it with the family. Great difficulty is experienced with the children to induce them to eat any food which is unfamiliar to them. They are not influenced as are the parents by the "cost of living."

Food is the most important factor in the lives of the families living on the average income of the workman, \$600 to \$700 per year. He spends the greatest part of his income for food, for according to Engel's laws the less the income the greater the percentage that must be spent on food, thus leaving much less for the "region of choice," the pleasure and amenities of living, without which life is of a doubtful value. The truest way to reduce the cost of living and the only scientific one is through a knowledge of calories. The mother in the tenement may never know of the existence of such

¹ Written for the Seventh Annual Meeting of The American Home Economics Association, Cleveland, 1914.

computation, but the Visiting Housekeeper must plan the meal accordingly, and, through her suggestion and the mother's constant imitation, a habit will be formed and a general procedure established. The experience of many women as housekeepers is an excellent guide and "mother's cooking" is always an ideal; yet in this profession one of the requirements must be a knowledge of food values, and if that is conceded then the courses in Home Economics must recognize this new worker, planning the curriculum for her needs.

The externals reflect the life of the people. The shops are indicative of the nationality, and of the frugality and other habits of the neighborhood. Would an Italian grocery be without macaroni? It is a sad commentary on our general teaching that in many of the crowded districts that do not have a foreign atmosphere the cheaper foods are missing. In one of the districts near Boston, lima beans, lentils, cereals in bulk, crisco, butterine were almost impossible to find.

Living on a very small income in crowded quarters, the habit of living from day to day has grown upon the people. The Visiting Housekeeper must gradually arouse an interest in the economics of buying and a satisfaction in a good-looking shelf of foodstuffs. A little pamphlet is to be printed, giving a list of some two dozen dry foods with advice as to their use. This pamphlet will tell of the cereals that can be bought in bulk, how to buy and store them, and how to cook them.

An interesting experience was the gathering together of several mothers at one of the homes and having a "cereal afternoon." To insure an attendance each mother had been provided with a different cereal which she was asked to cook and bring. On the afternoon the Visiting Housekeeper reheated the cereals—boiled, baked or fried them, and served them with additions of milk, syrup or fruits. Everyone wanted to try each kind and a child who accompanied her mother, to the latter's great surprise, for she said that her child would not eat cereals, tasted them all. The variety that could be bought loose and the many ways to serve the cereals were a revelation to most of the women.

The Visiting Housekeeper, then, must be trained to know the value of food, how to purchase, store, prepare and serve it, adapting these processes to the needs of the nationality, traditions, income, prejudices and bodily needs in health or disease.

A very necessary help is a food record. A woman's off-hand narrative is not authentic. In Boston a booklet of eight pages, 4 x 6, has been prepared and is ruled off for each day of the week, with space for breakfast, dinner and supper and extra, and a column for the cost. The first page has the title, "What I eat," and a place for name, address, date. This is only a suggestion of a method. A penny notebook would suffice. Cincinnati Relief Society has a record printed in English and Yiddish and is to be filled out by the mother. This daily record gives the Visiting Housekeeper an idea of the food habits of the family and upon this she can base her future work. But the record will not suffice merely for a society to base its relief upon; it should be the means of the rehabilitation of the family—perhaps gradually changing the diet by adding new dishes, or what the family may need as studied out by a trained Home Economist.

The Visiting Housekeeper must make the home kitchen a rival of the "bakeshop," for there more money is unwisely spent than in buying too costly meats. In one large family of children, by home baking instead of buying, eighty-six cents was saved in a week, and in another family, by having the Relief Society advance the barrel of flour a saving of 100 per cent was made between "bags."

All who have entered the field since Miss Gibbs are deeply indebted to her and to the work of the Association for Improving the Condition of the Poor for their leadership in scientific management in the homes of the people.

Conservation of human life is largely accomplished through sanitation. Laws may be passed, but there is a wide divergence between the law and its enforcement, the acceptance of the theory and the neglect of the practice.

Here again the Visiting Housekeeper has her field—a large opportunity to assist in establishing healthful homes by helping to clean the homes, and teaching the home-makers to maintain them in cleanly condition. There are hygienic and unhygienic ways of cleaning house, sweeping, dish-washing. The trained woman with previous experiments in the bacteriological laboratory with exposed Petri plates knows the story, and here again must convey that knowledge to the mother.

The mothers of the tenements are coming to understand sterilization through the lessons in keeping babies' bottles clean, and the

general work of the medical profession in teaching them the care of tuberculous patients.

One family, the dirtiest of about 2000 patients at the dispensary, was consigned to my care. The only cleaning utensil in the house was a stub of a broom. A series of visits, of scrubbings, of diggings, of scraping the dirt from the floor with a knife, of cleaning back of the stove, under the stove, under the ice-box, to the right, to the left, above, below, had some effect. The house had been reported to the Board of Health and an inspector called soon after and really had a shock, when he examined the plumbing under the sink, the enclosed space was so clean, compared with what he had seen in former visits.

This illustration is given to emphasize the fact that if with intelligence and skill one Visiting Housekeeper can do the work of ten health officers, or one dollar in her hands can accomplish as much as ten dollars in the hands of a Sanitary Inspector, the larger expenditure is sheer waste.

To help the mother of the tenement, one must pursue with her the line of least resistance, and if energy is to be conserved, and time not wasted, she must live according to the proverb, a place for everything and everything in its place, and the organization attempting to help her must realize the demands on her of the daily round of work and the lack of equipment with which to accomplish it. Often coal and food are supplied, but the broken grate of the stove is not mended nor the cooking utensil supplied.

One Visiting Housekeeper little thought she was acting in the capacity of a medical-social worker, but after having supplied the mother with a double boiler as a Christmas gift the woman informed her she had helped her sore leg so much, because now she did not have to stand while stirring the cereal.

One cannot mention all the activities in one paper. Besides the advice and help given in regard to food and sanitation, there are the care of clothing, the adjustment of the budget, teaching personal hygiene, looking after general home interests, and the assistance that is sought in many ways after a friendship has been established.

In a very simple statement, the Visiting Housekeeper is a substitute mother, bringing her scientific knowledge to bear on the proper rearing of the children of the race, and leading the mother to a realization of her position and duties. For this new-old position, knowl-

edge must be added to the inheritance and tradition that has been the homemaker's through the centuries.

The Visiting Housekeeper for this must have the broadest training in Home Economics, food, sanitation, economics and sociology. And added to this she must be a lover of mankind, the personality that approaches the mother of the tenement with all humility, knowing that the mother is fulfilling a heavy task, usually sacrificing herself for others, that she is limited in time and money and knowledge, and that the Visiting Housekeeper must give time and strength, as well as knowledge, actually entering into the activities of the household.

To extend the work, the Visiting Housekeeper could teach the "Friendly Visitor" and direct her to carry on the work after the difficulties have been adjusted and the wheels have been set going. Further, there should be a strong bond of coöperation among all those who visit the family, so that all may work together.

The Visiting Housekeeper is a logical person in the scheme of modern social service—she is a help to the school nurse, the visiting nurse, the tuberculosis nurse, her problem is to coöperate with the relief, the medical, the industrial, the school agencies, endeavoring to establish the home on a sound economic and hygienic basis.

EXCERPTS FROM ANNUAL REPORTS OF CHARITABLE ORGANIZATION SOCIETIES SHOWING DEVELOPMENT IN VISITING HOUSEKEEPING

COMPILED BY EMMA WINSLOW

Lecturer in Household Arts, Teachers College, Columbia University

United Charities of Chicago, Report, 1912. Ignorance of home-making on the part of both father and mother is becoming more and more apparent. Training the family in home-making is fundamental in good case work.

The best way is through the visiting housekeeper. She teaches the woman in her home how to cook with her crude utensils and simple food materials and repeats her visits until the lesson is learned. She shows the mother how to buy wisely, to understand food values, the importance of cleanliness and fresh air, how to divide her income, how to interest and instruct her children, how to repair clothing, etc.

This work should be enlarged, and for those who contemplate

endowing any form of philanthropy, here is a splendid opportunity. The endowment of a visiting housekeeper means saving the present and building for the future in hundreds of families. The work lays a broad foundation for good family life and is the most effective service we have given.

Report, 1914. Four trained visiting housekeepers being employed by the United Charities. One visiting dietitian working under the Juvenile Court in the administration of the Mothers' Pension Act.

Boston Provident Association, Report, 1912. Beginning April 1, 1913, we shall have an instructive visiting housekeeper who will carry into homes where such help is sorely needed, the most useful kind of instruction in the choice and purchase of food and the hygiene and general conduct of the home. This is the result of experimental work with the Tuberculosis Association which has shown the educational and constructive value of such an undertaking when carried on by a skillful and devoted inspector. In taking over the work, together with the valuable service of Miss Stern, we believe that we have excellent promise of being able to enlarge its usefulness as well as to add to the effectiveness of our help to families in need.

Cambridge Associated Charities, Report, 1913. Our ambition is to show so clearly what constructive work one worker can do, that later we may find a public eager to employ four such workers, one in each district.

Cooking lessons are only a part of this work. Hygiene, making over of old clothes and buying new ones wisely, proper care and discipline of children, marketing, value and use of different kitchen utensils, the care of fuel—all these need to be also included. It is ignorance in all these practical matters that is the cause of inefficiency in many families.

We feel that we have proved the wisdom and economy of the services of a Visiting Housekeeper in the Associated Charities. It now rests with the generosity of the public whether we are able to retain these services.

Roxbury Charitable Society, Report, 1912. If most poor families frequently need physician and nurse, nearly all of them need the teacher of housekeeping. As few of them would go to classes in settlements or elsewhere, it is best for the teacher to teach in the tenements themselves, and usually to teach each family or each mother separately.

Report, 1913. Mrs. Jennie T. Dahlmann from the Instructive Visiting Nurse Society spends part of her time as nurse in the dispensary and part as teacher of housekeeping in the tenements of our families. The work has shown that in order to improve living conditions, raise standards in home and instruct in expenditure of income, very intensive and personal work on the part of the visitor is required. Of the fifteen families dealt with, six have been given perhaps three-fourths of the visitor's time. The others have been visited less frequently and some have been seen only in class work.

Before arriving at the real work of teaching housekeeping the visitor must win the confidence of the family and acquaint herself with their peculiar problem or problems.

. . . . The classes which met at the Model Flat with Miss Stern's coöperation, are to be transferred to the room back of the Society's office which has been fitted up as a kitchen where women will see and use the proper cooking utensils, work together, exchange ideas and meet each other socially.

Detroit Associated Charities, Report, 1913. The visiting house-keeping work was started in December, 1912, because of the extremely improvident and in some cases harmful way in which the grocery orders were used by the poor. The visiting housekeeper in eight months of her work covered by this report, had made 383 calls, giving 174 lessons in 133 families. Besides doing the reconstructive work in the homes of the poor, teaching them to plan, buy and prepare nourishing and pleasing food, to clean windows, floors and wood-work, make and repair clothing, and even cane chairs, she has taught invalid cooking in the homes of the patients of the Visiting Nurses, and followed the Babies Milk Fund Nurses with instructions to the mother as to the preparation of cereals, stewed fruits, etc., an unknown art to the foreign women. She has also prepared well balanced and economical menus and grocery orders for the use of the Associated Charities workers.

She has also established classes where older girls in her families can be instructed in methods of food preparation adapted to their circumstances. These classes are taught by the Thomas Normal Training School students under her direction. She now has standardized all the settlement classes.

This work is supported by a special fund, and since February, 1914, has been independently organized.

Minneapolis Associated Charities, Report, 1908. Mrs. Bertha W. Roderick, visiting housekeeper, divides her time between the Associated Charities and the Pillsbury Settlement House where a housekeeping center is established.

Report, 1910. 390 visits by visiting housekeeper. *Report, 1912.* 559 visits by visiting housekeeper. *Report, 1913.* 477 visits by visiting housekeeper, Mrs. Roderick, and her assistant, Mrs. Martha J. Malusky, instructing poor mothers.

Brooklyn Bureau of Charities, Report, 1912. The Tenement House Committee has organized Tenants' Leagues with the following aims: Clean houses, well lighted and well ventilated, sanitary toilets, clean yards, hall, cellars and areas, unobstructed fire escapes, proper disposal of garbage and ashes, and immediate report of violations to the Tenement House Department.

It maintains a demonstration flat used as a housekeeping center and provides lectures for women and girls in hygiene, sanitation, housekeeping and tenants' responsibilities. It also maintains a small travelling exhibit.

Since November, 1913, one of the regular visitors in the Relief Department has been acting as a visiting housekeeper among families under the care of the Bureau.

New York City, Association for Improving the Condition of the Poor. Report, 1904. We have two visiting housekeepers, untrained women who do the work of a good mother, washing, cleaning, preparing meals, marketing, etc. *Report, 1907.* Miss Winifred S. Gibbs, a trained visiting dietitian, appointed. *Report, 1914.* The educational Home Economy work has met with a ready and interested response in the homes of the poor, and has become part of the regular scheme of family rehabilitation work. Its good results are shown in three general ways: (1) Saving of funds by teaching housekeepers the best use of relief and by systematizing food orders. (2) Saving of time and energy of visitors for their other work. (3) Minimizing the danger of applicants becoming a future burden by teaching them the best management of present resources.

In the homes the good results are shown in five definite ways: family expense systematized, family dietary revised, dietary for children furnished, general standard of living decidedly raised and health of family improved.

The home instruction is especially profitable in cases where relief

is being given in pension form, in cases of children returned to their homes from Sea Breeze Hospital and of mothers and children coming back from Caroline Rest, in order that the improvement already effected may not be lost, but continue and increase.

A real transformation which promises to be permanent, has taken place in 799 homes through the instruction of our four visiting housewives, one sewing teacher, and two dietitians.

Newark, New Jersey Associated Charities, Report, 1910. Visiting housekeeper work started by Friendly Visitors' Conference in 1905. Present worker is a woman of about forty-five years of age, bright, cheery and tactful and interested in people. She is always sent by the visitors, takes only a limited number of cases and follows them up as long as is necessary. She does not do cleaning, washing, etc., *for* the woman, but *with* her, except when the woman is physically incapacitated. She serves to supplement, not take the place of friendly visitors.

It is hoped later to employ a trained dietitian who should teach both friendly visitors and the visiting housekeeper, the principles of household economy. She must have some knowledge of these problems and it should be intelligent and systematic.

The need is nearly continuous in the houses of slovenly housekeepers, and does not correspond to such crises as demand the care of a trained nurse.

Cincinnati Associated Charities, Report, 1911. The small number of district agents and their numerous duties prevent the giving of close continuous supervision to certain families which they ought to have. To partially meet this need, during the past year the regular force was augmented by a visiting housekeeper. It is the business of this specially trained young woman to go into the most disorderly and poorly kept homes, to try to bring order from chaos. She helps the mothers wash, scrub and clean thoroughly if they promise to keep things decent thereafter. She teaches the housewife how to cook plain foods in the most palatable manner, how to save by cooking the same food in various ways and by utilizing the scraps; cooks meals herself as object lessons; goes marketing with the buyer of the family, teaches her how to buy so as to obtain the greatest nutritive value at the least cost; plans the menu for each day in the week, substituting cereals, pure milk, etc., for black coffee, leathery pancakes and various indigestible or expensive foods frequently

selected by housewives who are ignorant of the art of domestic economy.

She shows them how to make new garments or repair and make over old ones. She instructs them in the rules of hygiene and arouses whatever latent pride they may have in the appearance of their children and their homes. In many instances she has helped them bridge over the chasm between dependency and self-support and has become the household divinity in several homes.

She has conducted two neighborhood centers or classes where housewives come to learn cooking, sewing and other household arts.

Wheeling, West Virginia, Associated Charities, Report, 1913. In urging a special Domestic Relations Court and the establishment of a Probation Officer in connection with it:

Often home conditions and the lack of home-keeping ability in the wife are directly responsible for the husband's failings. Here the Probation Officer may, to great advantage, call in the services of a trained charity worker to assist in bettering home conditions. The visiting housekeeper is rapidly gaining favor where her work is understood.

Milwaukee, Associated Charities, Report, 1912. The salaries of the three visiting housekeepers are contributed directly by churches and individuals.

From Kansas City Housing Report, 1912. "In Milwaukee there is a Sanitary Squad made up of several lady inspectors appointed to make house to house visits in the poorer districts and teach housewives the art of housekeeping. After housing inspection is completed through a district, a list of delinquent houses is turned over to the Sanitary Squad. They enter designated houses accompanied by a police officer to furnish the necessary official authority, and give the occupants a practical demonstration in house cleaning. They teach how to sweep, scrub, mop, dust, how to hold a broom, how to wash the windows, clean stairs, privies, water-closets, kitchens and back yards. They show how to dispose of garbage, the correct use of the bath tub, how to exterminate insects, rats and other obnoxious pests which are always present in poor housing districts. In fact, the entire flat, house or tenement is put in as good sanitary condition as possible and the people given the best kind of inducement to keep it clean. The visit should, of course, be followed by subsequent inspection and systematic surveillance to produce lasting results."

THE HIRAM HOUSE MODEL COTTAGE: A SOCIAL SETTLEMENT

LAURA GIFFORD

Director of Household Arts, Hiram House, Cleveland

Our cottage is of the same style as the other houses in the neighborhood, but the bright lights, the clean curtains, the plants at the windows and the bright, happy girls who are always present, make our cottage an interesting spot in one of the most crowded foreign sections of Cleveland. But come in and see our cozy little house, furnished entirely by the girls and in the simplest way possible, that they may be able to make use of the suggestions in their own homes. The girls have painted the woodwork, selected the wall paper, woven the rugs, purchased and made the sheets, pillow-cases, tablecloths, napkins, and tea towels. Some of the furniture we bought at auction sales, the girls bidding, and if successful, carrying home the article to be painted or varnished to match the rest of the furniture.

If it is between four and five o'clock in the afternoon, you will find about a dozen girls over twelve years of age, each one busy, for there is much to be done. Just a simple practical cooking lesson, then the careful setting of the table, which the girls feel is never complete without the red geranium or primrose as a centerpiece. Each girl takes a turn acting as hostess and waitress. If you have never seen the homes of these girls, where dinner means a kettle of soup and a pot of coffee on the stove, from which every member of the family helps himself, you cannot realize the effort put forth by the girls in preparing the meal and then having it served by one of the class while the others sit at a table covered with a white cloth, use napkins and try to carry on a conversation. Here one comes to see how sensitive these girls are and how anxious, and also how capable when they have the opportunity. While part of the girls clear the table, wash the dishes and put the kitchen in good condition, the rest have a lesson in bed-making, ventilating the bedroom and in the general care of the house. After our work is completed and the house in order, the girls are ready and anxious for a good story or a game.

On one afternoon a week, the class in Public Health Nursing of the Visiting Nurses' Association gives a lesson in hygiene in the cottage. They teach, first, personal hygiene that the girls may take

better care of themselves and grow to be better, stronger women, and, second, infant hygiene, that these girls, so many of whom have entire care of younger brothers and sisters, may be more intelligent in their care. Last year, the girls made a baby's outfit and for the final lesson we borrowed a bright, healthy baby. The nurse demonstrated the baby's bath, dressed the baby in the new outfit and returned it to a proud and delighted mother. These nurses have also taught the girls how to be more helpful in their homes during times of illness.

The very little girls of five and six years have a share in the cottage, too. A little side room, equipped with tiny furniture, is the scene of the merriest play. Gently the baby doll is undressed, rocked to sleep, laid in the cradle and watched over. While she sleeps the hushed voices of the busy little workers may be heard as the children bustle about in their effort to accomplish the work in their little home. Table is set or dishes washed, clothes laid neatly in the dresser drawer or perhaps taken out and made ready for wear. In this little room the children in their fancy live through parties, wash days, and house cleaning time. One has only to hear these little people as they call "Can we play today?" to realize how happy this play is.

This little home has proved an ideal place for the Camp Fire girl to demonstrate her ability to buy provisions and prepare and serve meals in order that she may become a Firemaker or a Torchbearer. Many of the honor beads have been earned here.

On holidays, the cottage makes it possible for many to enter into the joyous spirit of the time in a way that would be impossible in dark dirty homes of several rooms with noisy, ill-cared-for children and uncongenial neighbors. At Christmas time, for instance, the bows of red crepe paper in the lighted windows, the sprays of holly which the girls have placed, the open fire and the groups of eager workers about the house, tell the neighbors of the cheer and good will for which our little house stands. For days before, each of the girls is busy planning and preparing the Christmas dinner. Then comes the choosing of a favorite friend as a guest and last of all, comes the day when the little Christmas tree stands in the middle of the table and these girls have a real Christmas party. For a week before Christmas each afternoon and evening the cottage is gay with the Christmas party of some group of girls.

But the cottage is not for girls alone. One of the most successful cooking classes was composed of boys from the neighborhood. The neighborhood visitor found a number of boys who were compelled to do the cooking and keep house for the rest of the family. This was sometimes due to the fact that the mother was dead, sometimes that she went away to work, or sometimes because she neglected her home. These boys were very willing and glad to have a cooking lesson once a week. We supplied them with butcher's aprons and they cooked, washed dishes and did the same work which was required of the girls. Often one of the boys would ask to cook some certain thing, saying, "We like it so well and nobody at our house knows how to make it now." A hike for the Boy Scouts brings with it visits and consultations at the cottage. Provisions are planned and bought. Practical recipes are sought and advice for the preparation of their meals is given the boys.

The mothers of our girls have formed a club which holds its meetings in the cottage each week. These meetings help to win the mothers' approval of the work that the girls have done. Tired mothers, working against what seem to be hopeless conditions, meet and are "company" in a clean, attractive little cottage. Sometimes these women patch quilts, sometimes they are tired and enjoy playing children's games or hearing a good story. After refreshments have been served, and they are ready to leave for their homes, one hears them remark, "Not nearly so tired as when I came." Last summer automobiles were supplied which took this club through the parks and boulevards. This was a different world to them, for they seldom venture beyond the market.

Scarcely is the laughter of the afternoon clubs gone when the older girls come from the candy and bag factories or the laundries to prepare their supper and spend the evening. Each girl pays seven cents which does not cover the cost of the supper but is as much as the girls can afford, for the majority do not earn over \$5 a week and often they must help support some one else. These girls want to find out how everything is done and the desire of each girl is "A cottage just like this for mine." In the evening the girls dance, sew, or, if tired, they like to sit around the fireplace. A nurse from the Babies' Dispensary gives a number of lessons in infant hygiene each winter.

On Sunday afternoons the cottage is an open house and tea is served to the girls and their friends.

Nine years ago, seven Bohemian girls organized a cooking class at Hiram House. Today, the same class continues with the same leader. Five of these girls have married and have attractive homes of their own. Once a month they come back to the cottage and prepare the supper, and their husbands come from work to enjoy the goodies made to surprise them, and to spend a happy evening. The influence that this cottage has upon the lives of the girls, who have been in touch with it for several years, is plainly seen when the girls are old enough to make a choice and have homes of their own.

A GIRLS' TRADE SCHOOL COURSE IN DRESSMAKING

MARY H. SCOTT

Instructor in Sewing, Milwaukee Public Schools

Believing that the Milwaukee Public School of Trades for Girls stands as a representative of what any school system may provide for the girls who do not enter high school, or who leave the grammar grades for various reasons, I am giving a detailed account of one of the courses of study as given at the present time in that school, hoping that it may be helpful to others interested in this line of work. Much that has been written upon vocational work for girls has been put in such general terms that it is difficult to obtain therefrom definite, practical ideas.

The aim of this school is to train the girl for homemaking and for a trade. For homemaking, by teaching her household sanitation through the actual work of caring for a model five-room flat which is a part of the school; by teaching her cooking through the actual planning and preparation of food eaten daily by teachers and pupils; by giving her ideas on furnishing a home through the study of the model flat, and the study of interior decoration in the Art Department. For a trade, by giving training in the technique of a given trade, and developing those qualities of character which enable the girl to command a higher wage than the untrained girl in the same line of work. The whole training aims to develop responsibility, adaptability, and, to a certain degree, efficiency.

In this school two trades are taught, dressmaking and millinery. The school is in session five days a week, and eleven months a year. The school hours are from 8.30 a.m. to 4.30 p.m. with one hour for lunch. Five hours are spent in trade, two hours in supplemental work. With each course supplemental work is given in academic studies, drawing and design, drafting (dressmaking only), cooking and household arts, and physical training. Two years is the time required by the average girl entering at fourteen to complete the work. Girls taking the dressmaking course spend the entire time in the school; those taking the millinery course spend a year and a half in the school, and must have two successful seasons in trade before graduation.

This article deals only with the course in dressmaking. Before a girl learns dressmaking she must have some knowledge of plain sewing. When a girl selects this trade, she must take the elementary sewing work unless she has had some training in this line before entering. The course in dressmaking as given at the present time is as follows:

I. *Elementary Sewing and Underwear*: Pincushion, sewing bag, apron, towel, nurse's bag or belt, cooking apron (two), drawers, bloomers, corset cover, princess apron, nightgown, small princess slip, large princess slip, petticoat, kimona.

II. *Children's Department*: Rompers, child's first dress, child's second dress, child's third dress, boy's suit, baby's slip, baby's dress, child's lingerie dress.

III. *Cotton Dresses*: Two plain house dresses, two fancy house dresses.

IV. *Waists*: Two middy blouses, four lingerie waists, two tailored waists.

V. *Advanced Dressmaking*: Tight-fitted lining, two silk or wool dresses, two fancy dresses.

VI. *Tailoring*: For personal use, suit, or coat and skirt; for custom work, suit, or coat and skirt.

VII. *Advanced Millinery*: Hat and accessories of ribbon, chiffon, etc.

At the completion of this course, the girl is given an examination which consists of making a child's dress, a simple house dress, a silk or woolen dress, and her graduating dress, entirely upon her own responsibility without the supervision of the teacher. She is usually

allowed three weeks in which to complete these garments. In the marking of these garments, skill and speed are two most important factors. Accuracy, neatness, judgment, honesty of work, color, and design also are considered.

Throughout the entire course, the girl works part of the time to make garments for her *personal use* and part of the time for the school. The order work is most important as it is by means of this that the girl has the opportunity of getting experience in handling fine materials as silks, velvets, nets, lace, and chiffons.

The teachers of the various departments have been consulted and the consensus of opinion is that the girls should be taught to think quickly, to understand directions, to execute well, and to be reliable.

In the elementary sewing and underwear, class lessons are combined with individual instruction; but a girl's advancement depends solely upon her ability, and application to her work. It seems more profitable in this work to have the girls make a number of simple garments, even if in an imperfect way, than to exact perfect workmanship from beginners, as that is always discouraging to the pupil and often positively harmful. Experience has proved that the teacher in this department should herself first work out the problems by actually making the garment so that she may know the difficulties and how to meet them. Such preparation means economy of effort, saving of time, and better results.

Each department has its own special problems but the methods used are similar, consisting of lecture or demonstration by the teacher and practice by the pupil under supervision.

Very early the girl learns that "a smart effect depends upon workmanship, cut, and material, designed for and adapted to a given personality." Carefulness and neatness in handling material, and proficiency in detail must be emphasized during the entire course, but in the advanced classes the girls must acquire a delicacy of touch that will preserve the crispness and freshness of very fine materials.

The supplemental work is correlated very closely with the trade work in the class room. Simple problems in fractions become concrete when given as tucking problems. Drafting becomes more interesting when the girl can study costumes, and work out her own patterns. The study of color harmony, design, and decoration is very real when applied to stencilling curtains and draperies or em-

broidering pillow covers, or to costume design and decoration in advanced dressmaking.

The appreciation of color, form, and workmanship can be developed to a large degree, even when natural ability is lacking. To the ambitious girl more difficult problems are given. As far as possible, work is adapted to the ability of the girls. Every effort is made to develop character and those qualities which make for wholesome and happy life.

The teacher's knowledge of her subject must be such as will command the respect of her pupils. It is in the daily association with the girl that neatness, cleanliness, good taste, obedience, kindness, helpfulness, responsibility, and honor are taught. The teacher's appearance, care of the class room, and her attitude toward her work and her pupils are the silent forces that influence character at this age. A demand has been created for the pupils of the school, and girls who have received this training do command a higher wage than the untrained girl in the same line of work.

The Milwaukee Public School of Trades for Girls is but five years old. During that time the registration has increased from thirty pupils to four hundred. It has now more than one hundred names on the waiting list of applicants for entrance. These facts clearly indicate the need of such a school in Milwaukee.

POTTERY GLAZES AND THEIR SOLUBILITY

C. F. LANGWORTHY

United States Department of Agriculture

The glazes used on tableware exhibit a great diversity of composition; they range from the hardest porcelain glazes, which consist almost entirely of felspar and quartz, to the softer earthenware glazes which contain silica and boric acid combined with alumina, lead oxide, lime, soda, and other bases.

There is little evidence to show that from the nature of their chemical composition the hard felspar and quartz glazes which are used on the better grades of tableware would be appreciably affected by dilute acids or by mild alkalis such as would ordinarily be present in soaps and the more common detergents. The wear upon the glaze through scratching by cutlery or through scrubbing with sand soap

or other gritty detergents, where this is done, would probably be greater than the solvent action of the soaps or any mild alkaline solution. There appears to be, however, some tendency for the soft borosilicate glazes to wear away under constant friction, which is not the case with the true porcelain or felspar glazes. Wherever the action due to washing is unusually severe, ware should be selected which is coated with the true porcelain glazes.

The solvent action of dilute acids upon the lead glazes, applies more especially to raw glazes before they are fused on to the ware. The fused mass or frit which contains the lead in an insoluble form is ground and applied to the ware like the raw glaze.

The glaze used upon common red and brown wares in many countries is obtained by coating the unfired clay vessels with powdered lead compounds. On firing, a glaze is formed which often contains considerable uncombined lead oxide. In the case of such ware and that coated with the ordinary lead glaze which has not been fritted there is a possibility that lead may be extracted from the glaze in the finished article by vinegar or fruit acids. This is especially true in the case of culinary ware, and a German enactment of 1887 required that eating, drinking, and culinary vessels should not yield lead when boiled for one-half hour with 4 per cent acetic acid. As lead glazes are not used on the tableware generally sold in the United States except in the form of fritted glazes in which the lead is present in insoluble form, the danger of lead poisoning from this source is not at all serious in this country.

A serious defect which may occur in glazed ware is the so-called crazing in which a network of fine cracks spreads over the glaze. This crazing may not develop for some months after the ware is finished and is due to a difference in the expansion of the biscuit ware and the glaze or to imperfect adherence of the glaze to the biscuit ware. There is a possible objection in the case of table and culinary ware that these small cracks may harbor disease germs as well as the fact that they allow the moisture to penetrate the glaze and cause it to split off in some instances. Fat will also penetrate through these minute cracks, as well as through larger ones, into the porous ware underneath, as will also soapy dish water. All know the result—the bad odor of such plates and dishes, and the taste imparted to foods cooked in them. Most of the potteries in the United States now manufacture tableware from biscuit ware having

an absorption of not more than 3 or 4 per cent and to these the glaze adheres perfectly. Where the conditions of use are very severe, white ware made from biscuits having a greater absorption than this should not be used.

INDOOR HUMIDITY

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It is a commonly recognized fact that the air in our houses is too dry in winter, especially in very cold weather. Now while it is not practicable, for reasons which will appear later, to produce a degree of indoor humidity in winter equal to that of the summer months, it is nevertheless possible to improve very materially on the conditions which usually exist. To this end the writer proposes, after a brief discussion of the physical aspects of the subject, to describe a system of humidifying whose convenience and adequacy have been proved by experience and which may be readily installed in any house heated by a hot air furnace.

The terms "relative humidity" or "hygrometric state" are used to express the ratio of the moisture actually present in a given space to the maximum amount which this volume can contain at this same temperature. When this maximum amount is present the air is said to be "saturated," that is, it is impossible for it to contain any more moisture: the slightest cooling under these conditions will produce condensation in the form of fog or dew. When the air is unsaturated—that is, when its humidity is less than 100 per cent—it will suffer a certain amount of cooling before condensation begins. This cooling is less the higher the moisture content, and so it is impossible to attain even a moderately high degree of indoor humidity in cold weather without more or less condensation on the windows.

The degree of relative humidity is measured by instruments termed psychrometers or hygrometers, of which one of the simplest and most reliable is the sling psychrometer, an instrument of the wet and dry bulb type. There is also in common use an instrument of this sort suitable for location on the wall of a room, but unless it is fanned vigorously for several minutes before taking a reading it is likely to indicate too high a humidity.

Although the term "air" has been used in the above discussion the air itself has really very little to do with the matter of humidity. For this reason it is perhaps better, in place of the frequently used expression "capacity of air for moisture," to speak rather of the "capacity of *space* for moisture." This capacity for moisture increases very rapidly with temperature, thus saturated air (space) at 0°F. or -17.8°C. contains 1.1 grams of water per cubic meter, while at 70°F. or 21.1°C. it requires some 18.2 grams for saturation. This explains why the question of humidity is so important in cold weather, for if saturated air at 0°F. is heated to 70°F. the amount of moisture it contains will be sufficient to cause a relative humidity of only 6 per cent. Unless a considerable amount of moisture is added, then, the atmosphere in our houses in winter will be drier than that of the most arid regions of the earth. It also explains why a furnace is commonly believed to dry the air which is taken into a house. The air is not really dried in the sense that it has lost any moisture but by virtue of its higher temperature it is made relatively less humid since its capacity for water vapor is greatly increased.

The amount of water which must be added to attain any desired degree of humidity is readily calculated. Suppose a house of 500 cubic meters or 17,000 cubic feet (attic and cellar not being counted); at 70°F. it would require, for a relative humidity of 40 per cent, some 7.3 x 500 grams or over three-quarters of a gallon of water, of which perhaps 10 to 20 per cent is already contained in the air, if this was originally saturated at a temperature of about zero. As, with good ventilation, the air is probably changed once an hour, if not oftener, it will be seen that some 15 gallons of water a day are required for this condition.

There have been suggested almost numberless ways by which a considerable evaporation of water may be produced indoors. As the writer has rarely found a humidity of less than 20 per cent even in buildings where no special means exist to secure evaporation, it is probable that the amount of moisture furnished by exhalations of the occupants is by no means negligible; but allowing for this as well as other occasional causes such as cooking operations, it is still evident that many gallons of water must be evaporated daily in a moderate-sized house in cold weather to secure even 40 per cent humidity.

Undoubtedly the commonest way of producing this evaporation in a hot-air heated house is by means of a water pan in the jacket of the furnace. As ordinarily placed, down near the base or coldest part of the furnace, this hardly produces enough evaporation to be worth consideration, and even when located near the top it is not likely that it will evaporate more than 2 or 3 gallons daily—hardly enough to raise the humidity 5 per cent. Realizing the limitations of this method, as well as the inconvenience of any of the more effective schemes involving pans of water inside the registers, teakettles boiling in every room, and other sound but extremely

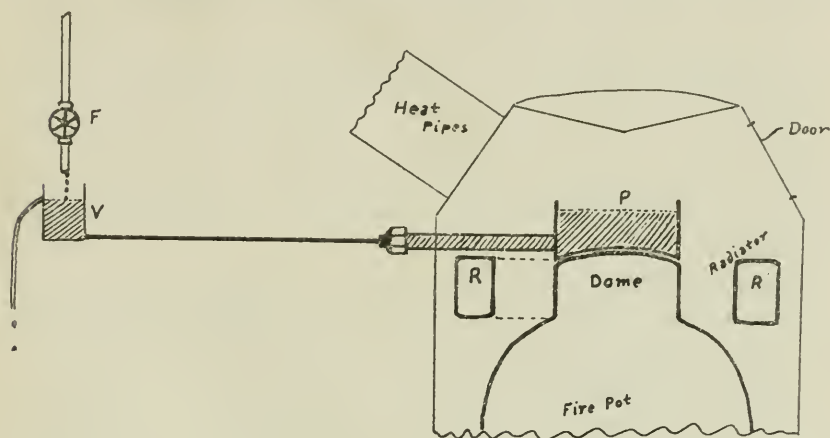


Diagram of Humidifier.

impractical methods of humidifying, the writer devised and installed in his home some two years ago the very effective automatic system described forthwith.

Inside the casing or jacket of the furnace, and right on the dome or hottest part of the radiator, was placed a cast iron pan (*P* in the diagram) with bottom shaped to fit closely. This is about 11 inches in diameter and 5 inches high and carries a 2-foot length of 1-inch pipe with a union on the end so located that it projects just outside the jacket. By means of the union, connection is made with a $\frac{1}{4}$ -inch pipe which leads to a small copper can, *V*, which has an overflow to a neighboring sink. The system is kept full of water by the drip from a faucet, *F*. This should be of the "gate valve" type as

the washer of the ordinary faucet tends to swell and shut off when dripping or running only a very small stream.

This arrangement automatically keeps the water up to within an inch of the top of the pan *P*. In cold weather the water is always at the boiling temperature and sometimes boiling vigorously, evaporating frequently a gallon an hour. It requires no attention whatever save for an occasional adjustment of the faucet so that the water is always overflowing just a little; also perhaps twice during the winter the cleaning out of the sediment in the pan, which is accomplished by disconnecting the union and removing the pan through the little door which is provided in the jacket.

The results of this arrangement in attaining the desired humidity are extremely satisfactory. As much moisture is added to the air as is possible without extremely annoying condensation effects. At the same time it is very rarely found that this gives too much evaporation. It was originally intended to provide a cover for the pan in case it gave rise to too high a humidity, but this has not been needed.

The actual relative humidity attained is not high: measurements made with an accurate sling psychrometer at various times during the winter seldom showed a value of over 40 per cent (at 70°F.)—an increase of perhaps 10 or 15 per cent over the ordinary winter value for most houses in this climate. As this 40 per cent humidity is much lower than the 60 per cent or even 70 per cent frequently recommended by the medical profession as the ideal value, the writer undertook to push conditions to the limit, to see if any such humidity was attainable, or at any rate desirable. Accordingly an auxiliary pan was added which almost doubled the evaporation. Under these conditions a humidity of 50 per cent was occasionally obtained, but in cold weather the condensation accompanying this value proved unbearable. Even the double windows were fairly running water and the walls themselves were occasionally found to be damp. The conclusions were that for a temperature of about 70°F. the ideal indoor humidity for winter in a climate such as that of Wisconsin is 40 to 45 per cent; also that 70 per cent would mean the atmosphere of a steam laundry, and that any recommendations of this value are either based on pure theory or else are founded on the scale of the old type wall hygrometer, which, as previously explained may be very inaccurate.

While it is impossible to prove that any especial advantages in health have been enjoyed as a result of this increased humidity, certain good features directly resulting from this condition have been observed. The atmosphere is remarked as being more "palatable" than in many houses, and there is a feeling of warmth and comfort at a temperature of say 68°F. which could not be obtained short of 72° to 75° in dry air. There is none of the usual winter dryness of the skin, and none of the annoying effects of electrification common to cold weather. While the condensation on single windows is a little bothersome there is no trouble with frosting or fogging on the double windows at the humidity recommended, that is, 40 per cent.

To sum up, the method described furnishes an efficient automatic way of raising the humidity in a hot-air heated house to the highest value desirable in this climate. It can be installed by any plumber at a cost probably between \$5 and \$10. If any difficulty is experienced in getting a cast iron pan such as described the writer will be glad to make arrangements whereby such can be secured from patterns in his possession. The system has been installed in two other houses in Madison, Wisconsin, and is giving equal satisfaction.

NOTES ON ELLEN H. RICHARDS MEMORIAL FUND

The Trustees of the Ellen H. Richards Memorial Fund met in New York recently and perfected their organization by electing Mr. Frederick B. Pratt, of Pratt Institute, Brooklyn, as Chairman, and Prof. Benjamin R. Andrews, of Teachers College, Columbia University, as Secretary.

Many orders have come in for the student play *Prince Caloric and Princess Pieta*, which has been printed in connection with the Ellen Richards Memorial Fund, and the play may very evidently become a source of money making by a student organization wishing to raise a contribution for the Richards Fund. It can be secured from the JOURNAL office for 25 cents, or ten copies for \$1. Secure it and plan an evening of fun in your institution or club with King Diet of the Kingdom of Pure Food, and his interesting subjects. It would prove very attractive if given out of doors.

Graduate students in the class in household economics at Teachers College, Columbia University, contributed to the *Household Arts*

Review an article discussing our debt to Rumford from various points of view in connection with Richards-Rumford day.

New Hampshire is taking its part in the canvass under the chairmanship of Miss Helen B. Thompson of the State Agricultural College who has recently sent a circular, regarding the Richards Memorial, to all the schools teaching Home Economics. Contributions have already come in from two of these schools and others will doubtless soon be reporting. The students at the State College had a candy sale on Richards-Rumford Day, which netted \$12 for the Fund.

January first brought a \$50 contribution from the Missouri State Home Economics Association; later \$20.16 was sent from Mills College, California, as the receipts from a candy sale; these, with other contributions, raised the total to \$3000.

The Trustees have placed the funds in a safe and guaranteed investment at 5 per cent, so that an income of \$150 per year is assured. The suggestion may be made to members of the Association having friends of means who desire to place a sum of money where it will do continued good, that here is a foundation, the income of which is devoted to research and publication for home betterment. Members of the Association may now by will devise property or funds to the Association with the certainty that it will be safeguarded by a Board of Trustees and that the income will be used in the future for this cause of better homes.

EDITORIALS

A Permanent Bureau for the Help of the Housekeeper. In the current number of this JOURNAL we print a number of papers on the subject of the Consulting Housekeeper. She had her origin in the Association for Improving the Condition of the Poor in New York when volunteer visitors in the families of the poor began to ask this sensible question, Why issue flour to women who cannot make bread? Why help to medicine alone when the cause of illness is the dirt and discomfort in the home? The records of this Society as early as 1904 speak of "Two visiting housekeepers, untrained women, who do the work of a good mother." In 1907 comes the record "Miss Winifred S. Gibbs, a trained dietitian appointed."

And this was the real beginning of what is now recognized as a new profession. The charity organizations of 19 cities now report one or more visiting housekeepers or dietitians, and this work is certain to grow.

Among the well-to-do the larger income covers a wider margin for mistakes, but the greater social and professional demands and the more complex standards of living are making it more and more necessary for all housekeepers to seek the information that has been worked out by experts who have made a special study in the best domestic science departments in the country.

We are beginning to recognize that it takes an immense amount of professional study and experience to master the problems of living today. Progressive housekeepers *are* reaching out for this help on every side, finding that they are saved many costly mistakes in time, money and strength by referring their questions to reliable sources. Heads of the Home Economics departments of our various schools of household arts could spend, they tell us, their entire time answering over the telephone the questions of puzzled householders. So good are the questions, so evident the need, that they regret that their regular duties make the performance of this public service impossible.

Why should not this general need be met by an organized bureau for the help of the housekeeper? The farmer's wife has access at

least once a year to the force of trained teachers that conduct the Farmer's Week courses. The housekeeper of town or city has no such help.

We should like to see a woman's club backing an enterprise of this kind in its trial year. What would be necessary?

A small room in a central location fitted out with a few reference books, a card catalogue and the farmers' bulletins of state and United States, and presided over by a woman who has had modern training in one of our schools of household arts, also as much as possible of practical experience. Many questions she could answer off hand, other answers she would find in reference books or could learn by correspondence with workers in these fields. Then advertise it and see it grow!

Meetings for 1915. It is planned to hold the national meeting of the American Home Economics Association at the University of Washington, Seattle, August 18-21, at which time a program of professional papers dealing with the various divisions of Home Economics, including elementary schools, high schools, colleges and extension work will be offered; and to follow this with a congress of public meetings at Oakland, San Francisco, in connection with the National Education Association, August 26-28. At the San Francisco meeting it would seem in place to present papers which will make plain to the public the purpose and aims of Home Economics work. As this meeting will also take on an international character, we hope to secure papers from foreign countries on the history and status of their Home Economics work.

For the Seattle meeting it has been suggested that the program should emphasize matters of distinctly professional interest. The Program Committee wish, therefore, to secure for immediate consideration a list of topics which members of the Association would like to see treated at either of the meetings. The suggestion may take the form of titles of one or more papers which an institution or school might be able to contribute to the program. What problems in public school work, normal school work, college work, etc., should be treated? What pieces of laboratory work or field work, or progress in methods of teaching, could be reported?

Kindly send your suggestions at once to Miss Martha Van Rensselaer, Cornell University, Ithaca, New York.

HOUSEKEEPERS' DEPARTMENT

CLUB WOMEN APPROVE SENSIBLE STYLES IN DRESS

PEARL MACDONALD

Home Economics Department, State College, Pennsylvania

Miss MacDonald, Chairman of the Sub-Committee on Clothing in the Home Economics Department of the General Federation of Women's Clubs, has written a report which appeared in the March number of the *Federation Magazine*. The JOURNAL has received permission to quote from it as follows:

We shall probably agree that American women are wearied with the constant and extreme changes in the style of our garments.

We ask: Who sets the styles? Who forms our fashions? What ends are secured in the striking changes presented every few months? What effect have these upon women in general? Are we bound or free?

Certainly we should grant that it is somewhat of an absurdity to ask and press legislation for better made and purer fabrics when now the garment wears longer than the style it portrays. And we should not expect to lessen the economic burden relating to this division of the budget until we are ready and willing to adopt those measures which will secure the same adjustments and values as men have already sensibly attained.

We want art and beauty in our clothes. To a degree these have been given us in the past two or three years. There have been special commendable features in the garments we have so recently been wearing. Freedom about the neck, throat and chest is as hygienic as freedom about the waist, and we have had both. The plain, close fitting, short skirt is sanitary, economical and convenient. Short sleeves are useful in many ways and are, when admissible, a source of great comfort and saving for many who must work with hands and arms at office or house work. Yet already full skirts, long sleeves and high collars are being pressed upon us.

There are many reasons why we urge upon all club women not alone a study of this situation as it presents itself at this time, but a determination to meet it in sane and proper ways.

First, because we earnestly believe that this is one of the vital steps in securing that standard of refined and womanly living which should mark this period of our club life.

Second, we know it to be necessary to the lessening of the economic pressures burdening so many thousands in our great and beautiful and fertile land.

Third, we are our sisters' keepers. The habit of following extreme and quickly vanishing styles creates great hardship for those who produce as well as wear ready made garments. The women who demand the ultra fashionable in dress should be brought to consider the effects of this upon the lives of those who must wear what can be bought and whose clothes are worn until they wear out.

Our first suggestion is a study of the budget and its five main divisions, rent, operating expenses, food, clothing and higher life. What part of our income can rightly be spent for clothes? How can we secure them at that price? How purchase? What purchase? Why?

A SHORT STUDY OF TEXTILES AND CLOTHING

Any part of this can be taken for a detailed study outline or for a single program.

1. Materials used in early times: Branches, skins, grasses, rushes, leaf fibres, treated bark, wool, cotton, flax.

(a) Purposes: Floor coverings; roof coverings; carriers; hangings; garments.

2. Development of textile industries. On request, detailed outlines will be sent by Miss MacDonald, State College, Pa.

3. A study of garment making industry in America: Work of the Consumers' League; women and children in the textile and garment-making industry; sweat shop labor; tenement house work.

4. The ethics of shopping: A knowledge of the appropriateness of a material to its intended use; a definite purpose in shopping; responsibility toward shop girls and the purchasing public.

5. A study of materials: (a) wool, silk, cotton, linen and adulterations of these; (b) what constitutes good materials; how to select; the factors of judgment; (c) color and design; (d) a study of trimmings—laces, embroideries, etc.

6. The hygiene of clothing: (a) general health requirements and conditions; (b) thermic properties of clothing; (c) the infection and sterilization of clothing and fabrics; (d) choice of material for underclothes; (e) choice of material for dress; (f) appropriate costuming; (g) healthful dress.

7. Economic aspect: (a) the cost of clothes; (b) wearing qualities of materials and durability; (c) beauty of fabric in relation to cost; (d) appropriate dress.

8. The responsibility of the consumer: (a) in selection; (b) in care; (c) economy in individual income—cost of fabrics, relative cost, home made or ready made, effect upon efficiency of individual, economy in use, cleaning, laundry and use problems.

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The committee, through Miss MacDonald can supply the following pamphlets for ten cents each: Hints on Clothing, Mrs. Mary Schenck Woolman; Hints on Choosing Textiles, Bertha E. Titsworth; Choosing Textiles, Charlotte W. Gibbs; Study of Textiles, Nellie Crooks.

THE TRAINING OF CHILDREN IN THE SPENDING OF MONEY¹

HELEN LOUISE JOHNSON

Some of us may have been cultivating the disease with which Eugene Fields was afflicted—that of “incurable childhood.” If so, we are so much further advanced in that knowledge which means adjustment between the adult and the childish world.

As man's inherent right is to be a man and woman's is to be a woman, so the child's right is to be a child. That we interfere with this presumptuously and blindly many are beginning to realize, but how to avoid it and yet train the child is one of the problems of the age.

The most frequent accusation brought against the youth of today is that it is irresponsible, but how can a sense of responsibility be

¹ Extracts from an address presented at the Seventh Annual Meeting of the American Home Economics Association, Cleveland, 1914.

developed except by sharing responsibility? There is no real equality in too many present day homes—no sharing of work as well as of pleasures—no tasks—no responsibilities—no opportunities afforded for the training of self-control and self-restraint—in all these things which develop the will.

Two years ago at the close of a talk to a Mothers' Club, this question was asked: "Would you give a 15-year old girl an allowance with which she should buy all things wanted and needed outside of her housing and food?" With it, under guidance, it was inferred that she was to pay for all her clothes and her pleasures; supply her needs and her wants in those things which are strictly personal. I unhesitatingly replied "Yes."

The consumption in every home has its impress upon all our economic and sociologic problems. It is not enough that girls should return to their homes from school and college with a knowledge that such problems are somewhere in the world, and seek philanthropic or other outside work in order to help solve them. The key to the secret of the solution of all these things lies in the home whose keeper and guardian is the woman. If it is true that the business of the woman is consumption, she needs to be taught to consume and this must begin with the first allowance. This allowance, a certain amount for certain things, should begin as soon as the child begins to recognize money as a means of exchange. The difficulties are many. The freedom necessary for expression of self and the training in knowledge and control are not easily gained but they may be met by the use of one rule—the child should be treated as an equal, shown the same consideration and confidence as would be shown an adult in the same place. The greatest test of wise parenthood comes in that place where the development of the child's own personality, rather than the impress of yours upon it, is the thing.

Mathematics is an exact science. Its study outside of practical uses is believed to inculcate truth and uprightness. I am not going to argue this, but I am going to say that no other lessons are more valuable than those which prove that one from one leaves nothing; that you cannot eat your cake and have it too; that having chosen one thing, you cannot have this other desired object also. But I realize that I am not advocating any easy thing. Growth, physical development, is in a very large way conditioned upon peace. Nature has given to the child a most wonderful power of removing itself

from external disquietude about it and betaking its mental self into its own place. Then what do we do? Interfere, correct, disturb, drag it back into the land of the Olympians, a land of non-understanding ideas, furniture and door knobs all out of reach and mostly out of vision. Instead of interference should be coöperation. In place of correction should be that sense of responsibility only developed by holding the child responsible for the result of his acts.

The strongest constructive factor in the education of a human being is the settled quiet order of a peaceful, well conducted, real home. The child's actual participation in this should be as great in every way as it is possible to make it in justice to every member of the family whose individual and communal rights should be asserted and maintained. The right to actual privacy—to the *privilege* of work—the *sharing* of pleasure and responsibilities must be recognized by parents and such a plan of living formulated as to make these things possible. These children should be met and taught and developed and trained on the same plane with their parents. Being Olympians and giving is not meeting the child as one's equal. With seriousness and sincerity these children must be permitted to share our lives, learning the indispensable lesson that faults, wrong doing, mistakes and false actions cannot be atoned for or blotted out, but must always have their consequences. Only suffering the consequences of a wrong use of money can teach the lesson wrong use brings. Only realizing the returns of right use can establish right values, and this use should begin with the first penny.

The first thing we have to confront in the everyday world about us is that something has to be expended for something; or that we buy everything we get by giving something for it. A child learns this quite early, and barter obedience, or clean hands and face, or keeping quiet for a desired thing. You may not come to the table until your face and hands are clean, is but the price you have placed on the satisfying of a need called hunger. Now the basis of economics is needs and wants. As our wants are transformed into needs the world advances. As we learn to sacrifice immediate gratification to ultimate satisfaction, our character and life develop. "The mark of child and savage alike is that each cannot wait." Only as civilization advances can man be taught to forego a present seeming good for a future ideal.

How are we going to teach these economic truths and values? Is there any possible, direct, forceful way, except by allowing the child to experience them? Devotion to duty, sense of honor, a knowledge of truth, are not childish traits. They are developed through training and education.

MORE ACCURATE MEASURES FOR THE KITCHEN

One who has been through a house furnishing store and noted the great number of inventions that apply to every possible household process may well be incredulous as to the suggestion that any more are needed.

But what the scientist calls "instruments of precision" are sadly lacking in our kitchens. Our measuring cups and spoons, for instance, are so imperfect that only an experienced person can successfully use them in putting together a recipe where accuracy is important. One half-pint tin cup may hold 2 or 3 tablespoons more than another, and the crease which marks it into quarters and thirds is an abomination, for it can not be kept clean easily. As to the teaspoon and tablespoon they have been adopted as measures simply because they are in every household already at hand. But suited to how different a use! Shallow and flat they may well be for putting liquids into the mouth, but their shape is wholly wrong for measuring since a scanting or a heaping over so broad a surface results in a serious difference in the measurement of small quantities. A measure for anything should be at least as deep as its diameter and it should stand without upsetting. When are we going to demand the right measures for cooking, stamped to insure uniformity?

An accurate oven thermometer is another greatly needed instrument. A thermometer is fixed to the oven of certain ranges and although it does not register correctly, it is generally faithful to itself, that is, if 350° has been found to register a good temperature for baking bread today, the same can be used tomorrow, and it is therefore of some assistance. But we should like to ask of the manufacturer whether it is impossible to make for the home range a thermometer accurate enough so that the proper baking temperature as set down in a cook book may be followed.

SERVING WITHOUT A MAID

A guest at the Pratt Institute Practice House gives the following description of the serving of luncheon—and it carries a suggestion to the housewife:

In this house were living six students who were performing on successive days the duties of cook, assistant cook, laundress, chambermaid, waitress, and hostess. A teacher has charge of the house and eats with the group. The hostess alone of the student group eats breakfast and dinner with this teacher and two invited guests—different ones each meal. At luncheon there are no guests, but the whole family of seven sits down at table.

We were eight at table, the students (except the hostess) wearing their pretty uniform of blue with white caps and aprons. The polished round table was set with white doilies and mats (this method now being approved for dinner as well as for luncheon). In the center on a heavily weighted standard about 6 inches in height was mounted a circle of plate glass on which stood salt, pepper, sugar, cream, butter, rolls and other accessories to the meal, and in the center a rose glass with a single rose. This "servette" (\$10) revolved and it was a helpful part of the table service. The soup had been placed on the table before we entered and when it was eaten, those who were distant from the hostess, who presided, placed the empty plates on the servette. She removed them to a double-decker japanned wheeled tray (\$18) which stood at her right. She then served the next course, the main dish of which had been placed on the table in a heated covered platter before the meal began (the other dishes being on the wheeled tray), and it was passed with the aid of the servette. By the same method was served a cold dessert which had been placed ready on the lower shelf of the wheeled tray. At any time during the meal anyone could help herself to anything from the servette without troubling anyone else at table. A touch whirled it about. No one arose from the table and the serving was orderly and quiet, and did not interrupt conversation. At the close of the meal everyone helped remove dishes to the wheeled tray and the doilies to their proper drawers. In a twinkling the table was cleared and the wheeled tray carried everything to the kitchen.

TIME SAVING METHODS IN HOUSEWORK

There are many methods in vogue in the household which are not the most efficient but which pass notice because in each instance the loss of time or material is so slight. What might well be held in the imagination is the enormous aggregate sum of the household waste of the community taken together.

An interesting illustration has been furnished by Mrs. Dewey of the Lake Placid Club who computed the saving of time in making beds that had been opened the night before in two different ways; first according to the ordinary practice of taking off the counterpane and folding it, and second by doubling it back over the foot of the bed. Mrs. Dewey says:

The difference in time between methods of bed opening is about one minute, the larger part being in replacing spread in the morning according to first method; there is also extra wear and more frequent laundering from its being tumbled more.

We had something over 850 guest beds occupied during August, and with one minute a day wasted on each, 850 minutes = 14 hours (omitting fractions) a day, 434 hours a month or 54 days of 8 hours each. With a private family and a half dozen beds it would mean only about 3 hours a month which would hardly be considered. It is in the large institution work where margins of time must be most carefully considered.

THOROUGH FUMIGATION FOR BUFFALO MOTHS¹

"The tacked-down carpet habit is a bad one from more than one point of view," says the U. S. Department of Agriculture's entomologist, and the Buffalo moth (or carpet beetle) is only one household pest that thrives under this securely-fastened floor covering.

Such housekeepers as prefer to keep their carpets fastened over the entire floor along with the attendant inconveniences must use strenuous measures to be rid of the carpet beetle. Thorough fumigation with bisulphid of carbon or sulphur dioxid is the best measure. If bisulphid of carbon is used, great care must be taken that there is no fire in the house when the fumigation is in progress, as the gas is very inflammable. The vapor should not be inhaled. The burning of sulphur in the form of candles, which can be obtained at

¹ Office of Information, U. S. Dept. of Agriculture.

any drug store, has been effectively used for many years to destroy other insect pests, as the bedbug, and will also kill the Buffalo moth if the fumigation is thorough. Two pounds of stick sulphur have proved sufficient for every thousand cubic feet of space. The chief objection to sulphur fumigation arises from the strong bleaching action of the fumes in the presence of moisture. Hangings of delicate color must be removed.

The carpets should be taken up, thoroughly beaten, and sprayed out-of-doors with benzine, and allowed to air for several hours. The floors must be washed with hot water, the cracks carefully cleaned out, and kerosene or benzine poured into the cracks and sprayed under the baseboards. The extreme inflammability of benzine, and even of its vapor, when confined, should be remembered and fire carefully guarded against.

Where the floors are poorly constructed and the cracks are wide, it will be a good idea to fill the cracks with plaster of Paris in a liquid state; this will afterwards set and will lessen the number of harboring places for the insect. Before relaying the carpet, tarred roofing paper should be laid upon the floor, at least around the edges, but preferably over the entire surface, and when the carpet is relaid it will be well to tack it down rather lightly, so that it can be occasionally lifted at the edges and examined for the presence of the insect. Later in the season, if such an examination shows the insect to have made its appearance, a good though somewhat laborious remedy consists in laying a damp cloth smoothly over the suspected spot of the carpet and ironing it with a hot iron. The steam thus generated will pass through the carpet and kill the insects immediately beneath it.

A new Farmers' Bulletin (No. 626) entitled "The Carpet Beetle or Buffalo Moth" may be had free on application to the Editor, and Chief, Division of Publications, Department of Agriculture, Washington, D. C., by the housewife who desires more information about this pest. It contains illustrations of the full-grown beetle and the larva which causes the damage.

VENTILATION

In the light of more modern studies in ventilation it would seem that the real explanation of the ill effects of bad ventilation is not to be found in the chemical composition of the atmosphere breathed.

Pure air contains nearly 21 per cent of oxygen. Except in extreme conditions the amount of oxygen in the closest halls crowded with people practically never falls below 20 per cent. Oxygen will, therefore, take care of itself and may probably be wholly left out of consideration in ventilating systems.

Again, the carbon dioxide of expired air does not become harmful to man until it accumulates to above 1 per cent, or nearly forty times its usual amount and the air in crowded rooms very rarely reaches 0.4 per cent.

The long-debated idea that expired air contains organic matter which is toxic has been abandoned by most physiologists. We may conclude with reasonable certainty that the discomfort in a badly ventilated place is due to the physical condition of the air in respect to temperature, humidity and movement, and not to any chemical properties. [Note the relief afforded by the electric fan.] The symptoms noted in closed, crowded rooms—restlessness, headache, dizziness, nausea, etc.—are to be attributed to heat retention. Overheating is the chief evil to be guarded against in ventilation at present. The chief danger of our torrid summer days is not the heat alone, but the combined heat and humidity; the same factors are responsible for the evil effects of the confined air of rooms. There is no doubt that the air of our American living-rooms and many schoolrooms and other assembly chambers is kept too warm.

Further investigations of the conditions actually existing in the midst of what is assumed to be inadequate ventilation are called for, according to *The Journal of the American Medical Association*.

To the statements in the above extract might be added the fact that, in ill-ventilated rooms, odors from clothes packed with moth balls or cleaned in gasoline and odors from unwashed bodies or bad teeth affect us unpleasantly. The effect may be psychological rather than material but it is not noticeable in well-ventilated-rooms.

WHAT IS THRIFT?

The American Society for Thrift offered a prize to school children for the best definition of thrift. The prize was won by Hazel Haag, of Warren, Pennsylvania. Her definition was: "Thrift is management of one's affairs in such a manner that the value of one's possessions is being constantly increased."

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Electric Cooking. W. H. Alabaster, *Elect. Rev.*, 73 (1913), no. 1869, pp. 451-454, figs. 5; abs. *Sci. Abs.*, Sect. B—*Elect. Engin.*, 16 (1913), no. 192, p. 590. (The author discusses and summarizes in tabular form data regarding the amount of energy required with electrical ovens of different makes to secure a temperature of 400 deg. F. and maintain it for 1½ hours, and regarding the comparative efficiency of different sorts of hot plates when used to raise the temperature of 3 pints of water to boiling, as well as the weekly cost of cooking for a family of 2 adults and 2 children when different cooking devices are used.)

BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS if the Journal price is listed.

Planning and Furnishing the Home. By MARY J. QUINN. New York: Harper and Brothers, 1914, pp. 190. \$1. By mail of the Journal, \$1.06.

The object of Miss Quinn's little book is to be of practical help to the every day homemaker and this object is fully realized from the beginning of the first chapter to the very useful hints given in the "Handy Man's" chapter at the end.

The fundamental principles of design and color are stated so clearly and simply that they are easily comprehended and the practical application made of these principles to the problems in furnishing and planning the home makes the book singularly helpful. The subject of historic furniture is treated in a unique manner—fully enough to give an understanding of this interesting subject but not in the usual detailed and exhaustive way which is intended for the connoisseur and which the average homemaker finds confusing and discouraging.

While the book is intended primarily for homemakers, teachers of domestic and applied arts will find it an exceedingly helpful book. It is written in an interesting, intimate style and is well illustrated.

Domestic Science Principles and Application. By PEARL BAILEY. St. Paul: Webb Publishing Company, 1914, pp. 343. \$1. By mail of the Journal, \$1.12.

In *Domestic Science Principles and Application*, Miss Bailey has contributed generously to the needs of teachers of domestic science.

The book is organized on the basis of a two-year course of study of sixty-four lessons. The sequence is logical.

The series as outlined includes, in addition to cooking lessons, lessons on waitress work, planning of menus, school luncheons, home management and household accounts and invalid cookery.

The recipes given as application of principles are varied, permitting choice by the teacher. Specific assistance in difficult lessons is given the teacher, e.g., in the bread lessons, "Suggestions to teachers on the method of conducting bread lessons in $2\frac{1}{2}$ -3 hours."

The book is decidedly practical in its trend, with strong scientific material as it relates to the practical. The economic and industrial phases are suggested rather than developed.

In the appendix are chapters on "Emergencies and First Aid," "Equipment for Teaching Domestic Science," "Suggestions for School Lunches," and "Score Cards for Judging."

Helpful illustrations and a thorough index are valuable features in the book.

Laundering. By L. RAY BALDERSTON, author and publisher, 1224 Cherry St., Philadelphia, Pa., 1914, pp. 214. \$1.25. By mail of the Journal, \$1.35.

Laundering has an established place among the sciences as embodied in household economics. An intelligent and successful treatment of the science of laundering demands that the teacher and the housewife, as well as the commercial laundryman know the principles underlying chemistry and the manufacture of textiles as applied to this question. Otherwise such fundamental problems as are concerned with stains, soaps, etc., cannot be properly treated.

Miss Balderston presents the necessary scientific facts in a clear and concise form, yet in terms which are intelligible to the housewife who may be untrained technically. The social and industrial responsibilities connected with the industry, which rest alike on teacher, manager, and housewife, are sympathetically suggested in the problems of preventing, by sterilization, the spread of disease and in the labor problem as it affects employees of commercial laundries, as well as those in the private home.

Every aspect of the laundry problem is discussed. Fabrics, with careful description of each type, and the reactions that occur under changes of temperature, and by the presence of chemicals. Methods of cleansing, with the different types of soils and stains carefully classified, and the various kinds of stain reaction given clearly and in detail by means of a table arranged for ready reference. Under washing agents, soaps, starches, blues, etc., are discussed according to their special uses; and the directions are unmistakably clear.

The actual laundering process is described from the home laundry viewpoint. There follow directions for cleansing woolens, silks and other delicate fabrics. Various types of laundry machinery are described, and illustrated, with an equipment list for home and institutional laundries.

As a final division of the subject, there is a chapter for the teacher. It is full of practical suggestions, for application to individual teaching conditions. These, with the lesson outlines, and a classified bibliography, bring to a close a text-book which is of great value, and representative of the high standard which the teaching of this subject has attained.

Preservatives and Other Chemicals in Foods: Their Use and Abuse. By OTTO FOLIN. Cambridge: Harvard University Press, 1914, pp. 60. \$0.50. By mail of the Journal, \$0.55.

This is one of the Harvard Health Talks presenting the substance of public lectures delivered at the Medical School of Harvard University. In it, Professor Folin summarizes, in his well-known virile style, his opinions regarding the question of the harmfulness of the so-called chemical preservatives and of coloring and bleaching agents in food. Notwithstanding the fact that this is a summary of opinions rather than experimental evidence, and that we have been surfeited with all shades of opinion on this subject for some years past, many readers of the JOURNAL will doubtless be glad to have Professor Folin's view in the form of this compact and attractive little book. More than one-third of the space is given to the benzoate controversy, and about a fourth of the remainder to the bleached flour cases. Naturally, one can expect to find little that is new on such well-worn topics. The condimental preservatives (such as common salt and acetic acid) which are the most used both in household practice and in food manufacture, receive scant consideration in the present volume. We hope that a new and enlarged edition will soon be called for and that Professor Folin will then assemble and analyze the evidence on the relative preservative efficiency and physiological effects of all important preservative substances, each on its own merits as a preservative, regardless of whether or not it is also a condiment. It would certainly be interesting if we could know whether the usual discrimination in favor of the condimental as against the non-condimental preservatives is well founded.

The Household Arts Review. Edited and published by students of the Household Arts Department of Teachers College, Columbia University.

The December number (1914) contains the following articles: "Southern Girls Canning and Poultry Clubs," "Domestic Efficiency Engineers," "Opportunities in the Field of Bacteriological Work," "Meetings of the American Home Economics Association," "Bibliography of Domestic Art," "Count Rumford" and a complete index of the *Review*, volumes I-VI.

After the December issue, the *Review* abandoned its own form of publication and united with the *Teachers College Record* to form a new magazine of general and technical interest. The subscribers will receive as many numbers of the new magazine as will fill out their subscriptions, and new subscriptions may be made at the regular price of \$1.50 (\$1 for members of Teachers College Alumni Association).

For You [rules for sanitary living]. New York: Tenement House Dept., (1914), pp. 29.

In this pamphlet, issued by the New York Tenement House Department and Tenement House Committee of the Charity Organization Society, simple directions, designed largely for popular use, are given for good housekeeping, eliminating flies, preventing fires, and related matters.

The Ball Canning and Preserving Recipes. (Muncie, Ind., 1914, "E" ed., pp. 63, pls. 4.)

Directions and recipes are given for canning and preserving fruits and vegetables, together with some suggestions for the care of fruit trees, bushes, and vines.

BOOKS RECEIVED

Chemistry of Familiar Things. By Samuel Schmucker Sadtler. Philadelphia: J. B. Lippincott Company, 1915, pp. 320. \$1.75. By mail of the Journal, \$1.90.

Child Training. By V. M. Hillyer. New York: Century Company, 1915, pp. 287. \$1.60. By mail of the Journal, \$1.72.

Food Industries. By H. T. Vulté and S. B. Vanderbilt. Easton: The Chemical Publishing Company, 1914, pp. viii+309. \$1.75 post paid.

Food Products. By Henry C. Sherman. New York: The Macmillan Company, 1914, pp. 575. \$2.25. By mail of the Journal, \$2.40.

Household Accounts. By Edith Cuthbert Fleming. Ithaca, N. Y.: Department of Home Economics, Cornell University, 1914. \$0.75. By mail of the Journal, \$0.85.

Students' Accounts. By Edith C. Fleming. Ithaca, N. Y.: Department of Home Economics, Cornell University, 1913. \$0.50. By mail of the Journal, \$0.55.

Insects Injurious to the Household. By Glenn W. Herrick. New York: The Macmillan Company, 1914, pp. 461. \$1.75. By mail of the Journal, \$1.90.

OTHER RECENT BOOKS

The prices quoted are the publishers' net prices.

Manual of Household Management. By A. Butterworth. New York: Longmans, Green and Company, 1914. \$0.90.

Efficiency in the Household. By T. Q. Franks. Garden City, N. Y.: Doubleday, Page and Company, 1914. \$1.50.

House as Home. By J. Story. New York: George H. Doran and Company, 1914. \$1.

Food Preparation and Combination. By I. T. Cook, Chem. Bldg., St. Louis, Mo., 1913. \$1.25.

Table Decorations and Delicacies. By I. L. Follett. Philadelphia: J. C. Winston Company, 1914. \$2.

Low Cost Recipes. By E. G. Harbison. Philadelphia: G. W. Jacobs and Company, 1914. \$1.

Food and Clothing. By L. Osborne. Chicago: Row, Peterson and Company, 1914. \$0.60.

One Hundred Meatless Dishes. By A. P. Shirmer, Needham, Mass., 1914. \$0.75.

Decoration of the School and Home. By T. M. Dillaway. Springfield, Mass.: Milton Bradley Company, 1914. \$2.

NEWS FROM THE FIELD

Home Economics Work in the Schools of Illinois. New outlines for Home Economics have been adopted by the Domestic Science Section of the Annual High School Conference. These outlines have a two-fold purpose: first, to encourage the unifying of the work in Home Economics below the high school; second, to indicate the kind of work in household arts which can be successfully done by girls in the elementary schools. By this means, the teachers of Home Economics in the state of Illinois will have available for their use not only the syllabus for high school work, but also outlines for work covering the fifth, sixth, seventh and eighth grades. It is hoped that the outlines for the elementary work may prove as useful as has the syllabus for high school work.

School for Housekeepers, University of Illinois. The annual winter school for housekeepers was in charge of Miss Bevier and Miss Bunch who were assisted by members of the University faculty of the Departments of Art, Physical Training, Agriculture, Music, Library Science, Architecture and Sociology, of the University, members of the State Pure Food Commission, and also members of other university faculties.

The program gave opportunity for the discussion of a variety of vital home problems.

The topics discussed fall into four general groups, namely: Food, Clothing, Shelter, and Social Interests.

Extension Courses in cooking and sewing were also offered by the Department beginning February 1 and continuing for four weeks.

The additions to the staff of the University for the current year are as follows: Miss Margaret B. Stanton, Miss Greta Gray, Miss Anna Williams, Miss Mamie Bunch, who has been placed in charge of the Extension work which, because of the Smith-Lever bill, will be enlarged and strengthened. In addition to its present staff of Extension workers, the Department has also called to its aid four of its graduates, namely, Mrs. Cecil F. Baker, Mrs. E. W. Donoho, Mrs. John P. Stout, and Mrs. L. V. Walcott.

Iowa State Home Economics Association. The sixth annual meeting of the Iowa State Home Economics Association was held in Des Moines, November 5 and 6, 1914.

The session was presided over by Miss Catharine J. MacKay, President.

The first topic discussed was "What is being done to prepare rural school teachers to meet the requirement of the law regarding teaching Home Economics in the rural schools" and was responded to by Miss Ruth Wardall, of the University of Iowa, Miss Mabel Bently of Iowa State College and Miss Olive Young, of Iowa State Teachers College. This discussion was followed by an illustrated talk by Mr. Joseph R. Chittick, State Chemist, Dairy and Food Commissioner—his subject being "Sanitary Care of Foods."

The address of the afternoon was given by Miss Zona Gale, who gave an original story of much merit, and a short talk on the breadth and scope of Household Economics.

On the following day, three most excellent addresses were given: "Domestic Art," Miss Helen Donovan, State University of Iowa; "Relation of the Teacher to the Community," Miss Sophonisba P. Breckenridge, Chicago University; "Pedagogical Principles in Home Economics Teaching," Miss Abby L. Marlatt, University of Wisconsin.

Education for the South. Conference for Education and Industry and the Southern Educational Association and Conference for Education in the South will have a joint session at Chattanooga, Tennessee, April 27-30. This conference always gives serious attention to home interests. Programs may be obtained from Dr. A. P. Bourland, 508 MacLachlen Bldg., Washington, D. C.

Nebraska State Teachers' Association. The first Home Economics Session of the Nebraska State Teachers' Association held at Omaha, November 4-6 was attended by teachers of Domestic Science and Sewing from the High Schools and Normal Schools all over the state as well as by Home Economics instructors from the State University and other colleges. An exhibit of the work in sewing from the rural schools showed how far into the educational system of the state our movement has penetrated.

Miss Alice Loomis, University of Nebraska, presided and the following program was presented:

Sequence of Work and Breadth of Subject Matter in Domestic Art, Miss Helen Lee Davis, University of Nebraska; Organization of Work in Domestic Science Laboratories, Miss Neva Turner, Omaha High School; How Can the Home Economics Section of the State Teachers' Association be Made of Most Value to the Teachers and Schools of the State? Exhibit of Home Economics Work in the State, Miss Rose Shonka.

Following the discussions of these papers the entire audience visited the Omaha High School Laboratory, where Miss Turner's girls, working by twos, gave an excellent exhibition of a 45 minutes' domestic science lesson in a well equipped laboratory.

Mills College, California. The Mills College Home Economics Department gave a half-hour on December second to a program in remembrance of Mrs. Richards. Previously those in the cooking classes had devoted several hours to making candy; a sale netted the sum of \$20.16 which is to be added to the Richards Memorial Fund.

Another Easterner joined our Faculty last fall—Miss Ethel E. Taylor of Teacher's College, Columbia University, whose direction of the Textile side of Home Economics has increased the strength of the Department materially.

The proximity of the Panama-Pacific International exhibition gives the college an unusual opportunity this year to study educational problems. Members are looking forward to attending the meeting of the International Home Economics Association next August.

We hope to welcome Home Economics workers to Mills College as well as to the Exposition. Attention is called to the Mills College headquarters at the Panama-Pacific International Exposition.

Simmons College Summer School. The Household Economics Department of Simmons College will be in session from July 6 to August 14. Courses in cookery, dietetics, sewing, chemistry, biology, and education will be offered. Instruction will be given by the heads of the several departments, by instructors who give the corresponding courses during the college year, and by persons of national reputation whose services can be secured for the college only during the summer. Lectures and round-table discussions on some of the broader aspects of household economics will be conducted by special lecturers. The list of lecturers is not complete, but will include the following well-known authorities: Sarah Louise Arnold, Dean of the College, and Professor of the Theory and Practice of Education; George R. Bedinger, Director of the Milk and Baby Hygiene Association; Flora E. Dutton, Director of the Westminster Tea Room, Providence; Sophronia Maria Elliott, Assistant Professor of Household Economics, Simmons College; R. Hay Ferguson, Organizer of Coöperative Marketing, Extension Service, Amherst Agricultural College; Edna M. Klaer, Supervisor of the School Lunch, New York City; Jane Q. McKimmon, State Agent in Home Demonstration Work, North Carolina; Mary Moran, Director of the New England Kitchen, Women's Educational and Industrial Union, Boston; Martha Van Rensselaer, Director of Home Economics, Cornell University, Ithaca, New York; Annie Weeks, Visiting Housekeeper, Associated Charities, Cambridge; Grace T. Wills, Head Resident at Lincoln House, Boston; Jessamine Chapman Williams, formerly Professor of Home Economics at the Oklahoma Agricultural College. In addition to the full equipment of the Household Economics Department, the facilities of the Women's Educational and Industrial Union will be available.

HOME ECONOMICS WORKERS

Miss Helen Hollister, who was at Mechanics Institute eight years, first as assistant superintendent and then as superintendent of Domestic Science and Art, has accepted the position of Supervisor in the School of Household Science and Arts at Pratt Institute.

Miss Alba Bales (Normal Domestic Science, Pratt Institute, 1909), has resigned her position as head of the Department of Home Economics at the Lewiston (Idaho) State Normal School, to accept a similar position at the State Normal Training School, Pittsburg, Kansas. Miss Helen M. Wyman (Pratt 1914) has been appointed assistant in the department.

Miss Anna Hallock (Normal Household Science, Pratt Institute, 1910), recently supervisor of domestic science in the public schools of La Crosse, Wisconsin, has been appointed head of department at the New Rochelle (N. Y.) High School, to succeed Miss Mary Rausch.

Miss Winifred Nairn (Normal Household Science, Pratt Institute, 1912), for two years teacher of domestic science in the public schools of Brandon, Manitoba, has been appointed head of the Department of Home Economics in the new government normal school at Brandon.

Miss Clara Youngs (Normal Household Science, Pratt Institute, 1914) has been appointed head of the domestic science department of the Mill-edgeville (Ga.) Normal School.

Miss Clementine L. Bowman, recently teacher of dressmaking at the Newark Y. W. C. A. has been appointed instructor in trade dressmaking in the School of Household Science and Arts, Pratt Institute.

Miss Mary C. Brown (Normal Household Arts, Pratt Institute, 1914), has been appointed instructor in trade dressmaking in the School of Household Science and Arts, Pratt Institute.

Miss Ariel M. Ewing (Normal Household Arts, Pratt Institute, 1908), for two years on the staff of the Oregon Agricultural College, Corvallis, and later teacher in the Overbrook (Pa.) High School, has been appointed instructor in sewing for normal students in the School of Household Science and Arts, Pratt Institute.

Miss Lillian Baker (Wellesley 1914) has been appointed instructor in physics and assistant in chemistry in the School of Household Science and Arts, Pratt Institute.

Miss Pearl MacDonald (University of Michigan, 1898), subsequently a student at Columbia University and instructor in the Michigan Agricultural College has been appointed to take charge of extension work in Home Economics at Pennsylvania State College.

THE Journal of Home Economics

For those interested in Homemaking, Institution Management,
and Educational Work in Home Economics

MRS. MARY H. ABEL, *Editor*

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AMERICAN HOME ECONOMICS ASSOCIATION

STATION N, BALTIMORE, MD.



A stand of apples at 10 cents a basket



The farmer, having unloaded his wagon, ready for business

NEW YORK'S PUBLIC MARKETS (see page 241)

THE Journal of Home Economics

VOL. VII

MAY, 1915

No. 5

THE HOME¹

EDWARD T. DEVINE

Director, New York School of Philanthropy

What kind of homes we shall have—whether normal or abnormal—depends largely upon our standard of life.

When this standard becomes consciously idealized, when it has become ingrained in the habits and instincts of the people, when it extends to activities as well as to pleasures, when it operates to fix the age of marriage, the hours of the working day, the issues of war and peace, of life and death, of the here and the hereafter, we may justly call it by the phrase *THE STANDARD OF LIFE*.

The first material requisite to a normal standard of living is an adequate and regular income, earned preferably by the male head of the family—without assistance from his wife ordinarily, never with the aid of children who should be in school—earned without exhausting the worker's strength prematurely or exposing him to unnecessary dangers from accident and disease.

The second essential is that this adequate income shall be adequately used, and for this the housewife has normally the main responsibility. To woman by an evolutionary process has fallen the task of directing how the wealth brought into the house shall be used, whether much or little shall be made of it, what values shall be added to it. The woman at the head of a household is as truly an entrepreneur (if we may drop into the terminology of economics)

¹ One of a series of lectures on *The Normal Life of Man*, given in Baltimore during February and March, 1915. The lecture on *The Home* is here given in part. The series in book form may be obtained from The Survey Associates, 105 E. 22d St., New York City, about May 1. Price \$1.

as her husband at the head of a factory; she is as truly a producer of wealth when she broils a chop or washes the dishes, thereby increasing the utility of those commodities, as is her son when he helps build a bridge or repairs a drain-pipe or blacks someone's boots. Of still greater importance is the contribution she can make by determining a wiser consumption of wealth, not only by choosing more intelligently each separate article of food and clothing and furniture, but also by bringing about such a relation among all the different material elements of the home that the result is a harmonious unit instead of a haphazard assemblage of necessities of life. The person who arranges and groups commodities in such a way that their combined utility is greater than the sum of their separate utilities performs an economic service which is of equal importance at least with that performed by the one whom we call technically a producer.

Improvements in consumption which bring about greater harmony of combinations and consequently actually create a sort of excess value, hold the greatest immediate possibilities for advancing the general prosperity. In other words, and to be concrete, household management—or, to be still more concrete, every-day housekeeping for an every-day family—deserves and will repay, even from the point of view of the national welfare, the application of the best brains and the best educated brains of the land.

Under normal conditions, however, the wisest housewife, with an adequate income, is apt to be thwarted in her attempts to provide intelligently for her household unless society does some intelligent planning on its own account.

Even in the daily marketing there is scope for social coöperation, now that our market gardens extend from Key West to Halifax, and our poultry yards reach beyond the Mississippi. The cheapening of sugar, the development of cold storage transportation, and the invention of the art of canning fruit and vegetables have transformed our diet, but safely so only if the government inspects the canned goods, debars authoritatively poisonous preservatives, and makes the labels tell the truth.

Take the fundamental matter of choosing a home, that is, the physical dwelling-place of the family. For the great majority of families, choice is restricted to houses that have already been built by someone else. Where they have been built and what kind of houses they are has been determined not with reference to the needs

of the people, for homes as such, but by the real estate system, the tax system, the transportation system, and other things resting upon laws and the administration of laws, all of which have ordinarily had in view business interests, civic interests, perhaps, in a narrow and short-sighted sense, but not the welfare of the average family.

In a sound program of social construction the streets and parks and car-lines will all be looked upon as elements in the problem of domestic housekeeping. Transportation facilities will be developed, actively and consciously, into an adequate system, making it possible to get quickly and comfortably from home to work and back home again, and opening a variety of different residence districts to persons employed in the same establishment. Factories will be located in accordance with a consistent plan, based upon consideration of social welfare and worked out with scientific wisdom and prophetic insight. The city will be divided on what is called the zone system—not necessarily into concentric zones, but into districts suitable for its geographical contour and social needs, for the purpose of securing diversity in the character of buildings in the different zones, discouraging speculation in land, and preventing the duplication in outlying portions of bad conditions already established in the center. Direct legislation will ensure, furthermore, that all buildings intended for homes—at any rate, all congregate dwellings—shall have certain minimum requirements which have come to be regarded as essential.

In many places now the laws ensure that all tenements which are built shall be model tenements, that is, shall be as good in the essential features of light, ventilation, sanitary conveniences, security from fire and other similar dangers, as the dwellings erected but a few years ago, partly from philanthropic motives, and called “model” tenements or dwellings. On no other subject perhaps have we gone so far in putting into the form of laws or ordinances our social standard as we have in some cities on the subject of housing; and this is well, for the character of our domestic life is enormously influenced by the character of the houses in which we live. Think, for example, of the tremendous social and economic effects of such minor features as a garden, an attic, a cellar (with a cellar-door for a slide) and pantries, fences and a gate to swing on and a post to sit on. and roofs and verandas, to say nothing of more serious matters, like the size and number and arrangement of rooms, ventilation and water-supply and fire-escapes.

Before our discussion runs, as it inevitably must, into the destructive influences menacing normal home life, it is expedient to emphasize once more the positive resources for creating an affirmative home-life, that we may not draw the mistaken inference from these discussions, that painstaking defensive measures against the dangers represent the best social tactics.

There is no sociological recipe for family affection: for that continuing and ever strengthening love of man for wife and of woman for husband, without which there is no family in the true sense; for that, if need be sacrificing, but in any event always uncalculating love of parent for offspring, and that reciprocal attachment of child for parent which, beginning in physical dependence, may ripen into a conscious loyalty matching mother love itself; for all those, as we rightly say, "natural" ties of brother and sister, and other relations, extending into collateral lines indefinitely according to circumstances.

Common religious interests are among the strongest influences to support, develop, and maintain these natural domestic relations. The family altar is not so often outwardly visible in the modern home—partly perhaps because rents are high—but unless there is set up in the hearts of children a reverence for things really held sacred by the parents, one of the most ancient and the most essential of intangible family bonds is broken.

Economic equality within the family, amounting to the communistic formula, from each according to his powers, to each according to his needs, is another foundation stone of family solidarity. We accept that principle within the family as axiomatic. All the income is of course for the benefit, the wisely and justly apportioned benefit, of the whole family. If differences in education are made among the children, it is because of some real or assumed differences in their aptitudes, or because of changed conditions. Girls and boys share equally, eldest sons have no rights of primogeniture, youngest sons no exclusive claim to affection. The welfare of each, broad-based in the welfare of all, is our ideal, and even the persistent attempt at a practical realization of that ideal becomes a bond of union among the members of the family. No doubt that ideal fails in practice often from miscalculation.

Such failure will be less frequent when the practice of *budgetary standards* becomes common, in lieu of the haphazard spending of whatever is in sight without regard to future or even present competing

needs. As incomes increase, families have it in their power to pass over from forced standards to deliberately planned budgetary standards. On the lower plane they pay for rent, food, and clothing more or less what they must. There is no margin for long range planning, for saving and investment, as in building and loan societies, or life insurance (except for burial expenses). On a higher plane of income many families continue just the same method of expenditure, not having adjusted their psychology to their earning power. Any American skilled workman or office man can ordinarily plan his budget on a monthly or annual basis, or his wife can do it for him if she has the chance, as of course she should, and such careful planning of expenditure, such matching up of expenditure to income, taking account of common family needs, and also of the changing individual needs of its individual members, will become a bond of union and strength in the family household.

Common interest in the physical and mental development of children, from the day of birth, through infancy, kindergarten, school, apprenticeship, college, professional school, wherever the destiny of the individual guided by parental care and encouragement and all other complex influences may lead him, what subject is so engrossing in the family circle, what elastic and invisible bond more secure to hold together forever those who have shared the anxieties, the triumphs of such an interest as that of the education of the growing members of a family?

Common interests of any kind—such household pets as a horse or a Ford, a dog, a kitten, an aquarium of gold fish, a canary, a Victrola—family parties at the theatre or elsewhere outside the home, or within its circle, and all the multitude of miscellaneous socializing experiences—each makes its special contribution towards that unique and indissoluble whole, the home life of the family.

Let us think now of the pathological aspects of adult life in the home.

Among the vicious habits which impair or destroy normal family life, none other compares in devastation with the appetite for strong drink.

Alcoholism is no doubt sometimes an inherited taint, the outcropping of a degenerate germ plasm, certain to take some form of mental or nervous instability—if not inebriety, then some other less or more harmful. Sometimes it is no doubt a disease, even if not inherited,

akin to insanity. Sometimes no doubt it is a mere weakness of the will, an indulgence in pleasure, like overeating, or extravagance of any other harmful kind.

Primarily, however, when considered in its effect on individual and family welfare, alcoholism is to be looked upon as a habit, easily formed under favoring conditions, easily prevented at the outset under favoring conditions, beginning in youth or early manhood, increasing by easy stages, undermining gradually economic efficiency, the sense of family responsibility, personal and social standards, creating fleeting delusions of power and resourcefulness for which there is no substantial basis, and leading on, just as temperance reformers have always said, straight to destruction. physical, economic, social, and moral.

Bad associations and good advertising lead, I suppose, most often to the drink habit. The light and warmth of the saloon, its convivial sociability, its wide-open hospitality, its omnipresence where it is present at all, its business-like efficiency for its own ends, its brilliant advertising signs, its substantial backing by distilleries and breweries, by journalism and politics, and the feebleness of competitors in the kind of social service which it renders, are surely enough to account for the steady supply of victims of the early stages of this pernicious habit.

Another factor in the destruction of family life is disease. The high death-rate of early infancy from congenital causes and intestinal infections is followed by a relatively low death-rate in the years from five to twenty, though health has remained a prime object of solicitude at every period of life.

Most tragic of all diseases of adult life are those which cause the alienation of the mind.

Of early mature life the great scourge is of course tuberculosis. The principles of the world-wide campaign against this leading cause of death are far too familiar to need recapitulation. It is in all ways a health campaign. Its gospel of pure air and sunlight, plain and substantial food, cleanliness, abstinence from the use of stimulants, early diagnosis and rest from injurious occupation has certainly been one of the chief elements in the general sanitary progress of the past two decades. The enthusiasm which the anti-tuberculosis campaign has aroused is no doubt largely due to this fact, that nearly all its features of which the lay public takes account are equally features of any health campaign.

Typhoid, pneumonia, malaria, rheumatism, colds, and headaches all interfere with normal life in the home, as of course also with incomes and efficiency at work. Elementary policies of social construction demand consideration of each, to examine how they may best be controlled, how their economic and social effects may be reduced to a minimum and most judiciously distributed. They are not private, personal matters but social phenomena. No man has a right to have a headache even, if society can prevent it, much less typhoid, pneumonia, a cold, or any other communicable disease. The rights of others are involved in so many ways that the most unsocialized egoist must recognize that his diseases are affected by a public interest. The time has apparently come to concentrate on personal hygiene some of that same kind of attention that we have given to sanitation. There is not need to diminish the one in order to increase the other. Probably the next great step ahead in the protection of public health is the working out of some plan by which every person shall be periodically examined. The Life Extension Institute presents one plan to carry this idea into effect. Health Departments may come to offer such examinations free to those unable to pay for them.

Sickness insurance seems a more pressing problem in this country than old age insurance or unemployment insurance, more necessary than mothers' pensions or any other form of public relief. It should cover, as it does in European countries, maternity insurance and life insurance on an ampler scale than our present industrial insurance companies provide. The expense should be divided between the insured and his employer, who will have the same opportunity to pass his part on to consumers in the form of slightly higher prices than he has in the case of compensation for accidents. If necessary, the state can assume a part of the cost, as the prevention of sickness and the distribution of its burdens is properly a public function.

Sickness insurance does not of necessity mean sickness prevention, but it is easy to unite the two harmonious and closely related policies into a consistent policy of sickness insurance and prevention. A Federal Health Department, vigorous state Health Departments, even more energetic and well supported local municipal and rural health boards—all engaged in a well-knit campaign of prevention and education—will be outward and visible signs of that public health ideal of which sickness insurance is another normal expression.

Disruption of the family by divorce or desertion, intemperance and crime, insanity and disease, widowhood, overcrowding in tenements and alleys, unemployment and irregular employment, uncompensated accidents, sweating and exhaustion from overwork, disaster, in a word, from exploiting industry on the one hand and from broken homes on the other are the tragedies of maturity, as neglect is the tragedy of infancy, the lack of nurture of childhood and the perversion of character of adolescence. The aim of normal life is to anticipate and prevent these tragedies, the aim of social work is to mobilize the forces of society for honest, straightforward, persistent, comprehensive attack upon them as pathological abnormalities which any self-respecting society will never deliberately tolerate.

The home which occupies the center of our attention just now, has wonderfully changed in its outward physical aspects in recent years. Hospitals, kindergartens, restaurants, and factories, have taken over on a large scale functions once performed in the home. Society has organized somewhat on horizontal levels, taking children as well as adults out of the home for some activities, some enjoyments, some mere conveniences for which our fathers had no parallels. I hear of a defensive parents' league, a sort of trade union to withstand what are felt to be the unreasonable demands of school and society on the time of young children.

How are these changes as a whole affecting the home? Are they making it perhaps superfluous? Are they destroying its unique character, transforming it into at worst merely a mechanism for perpetuating the race, and at best a high class boarding house or a sort of club in which a few congenial, but by age rather ill assorted, people preserve the vestiges of an obsolete institution?

A closer analysis will lessen such apprehensions. What is it after all mainly that the home has lost by the revolutionary changes so much in our minds? Mainly disease and noise and dirt and drudgery. The factory and the office are better places in every way for active work than the home ever was. A well managed hospital is often if not always a better place to be sick in than a family sleeping room if the illness is serious, requiring medical attention and nursing. The theatre and the "movie" are after all more entertaining than backgammon and puzzle pictures. The rivals of the home are rivals in very limited spheres. Its unique sphere remains untouched, the more distinctly its own because of the specialization of functions. Home

is not a boarding house but a complex of relations, physical and spiritual, which were never more beautiful, more enduring, or more ennobling than in the modern family. Romance has not departed from it, though a clearer recognition of ethical obligations has come into it. Religion still creates its atmosphere, though it is a milder, freer, healthier religion than the austere faith of ancient Rome or that of the Mosaic law, both of which have made such a lasting impress upon the family.

We may look to the transforming, emancipating influences of the future without apprehension. The family will survive, and the home will survive as its habitat, the more wholesome and the more efficient for all the new resources of civilization, for the normal and not the abnormal is the fit to survive.

THE PRESENT SITUATION IN AMERICAN COLLEGES AND UNIVERSITIES WITH RESPECT TO COURSES ON THE HISTORY OF THE FAMILY

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Some time ago the writer became interested in discovering how many of the American institutions for the higher education of young men and women were offering courses specifically designed to enlighten their students concerning the history and functions of the family and the forces now at work to disintegrate it. The results of a brief study of college catalogues proved that most of our universities and colleges, those exclusively for men or women, as well as those state universities that are co-educational, relegate this subject to general courses in sociology or social ethics where it plays a subordinate rôle. Relatively few institutions offer thorough courses in the evolution of domestic customs and laws as introductory to a consideration of modern problems centering about family life. This means, of course, that thousands of young men and women are being graduated from our colleges of liberal arts yearly with only some very general notions of the family as a social institution, gained from general courses in sociology even where these are required. Thus imperfectly equipped, if they are equipped at all, these young Bachelors of Arts or Science go forth into the world of living human experience with little insight

into the causes of the family friction that they see around them and of which they read in almost every periodical they open. One of the chief benefits which should be derived from a sound course on family history and problems is the ability to evaluate the various schemes of reform so confidently promulgated in our magazines by radicals and conservatives of every shade. Yet this valuable training the students of our higher schools are in many instances receiving indirectly or not at all.

But it is an encouraging sign that several American universities have adopted courses definitely treating of domestic institutions from a historical and analytical point of view. Thus Brown University offers a strong course on "Ancient Society and its Institutions" which is specialized with respect to marriage, family organization and the development of domestic relations. This is supplemented by a course on "Social Problems and Conditions" in which the modern family receives consideration along with other social institutions. The University of Indiana likewise affords its students an opportunity to study "Domestic Institutions;" and Kansas University offers a full and carefully outlined course on "The Family." Likewise New York University has for several years furnished a valuable course on "The Family and Eugenics." Other institutions offering specialized courses on "The Family" are Adelbert College of Western Reserve University, Ohio State University, the University of Puget Sound (course called "Domestic Sociology"), Santa Clara College, Simmons College, Teachers College of Columbia University, Vanderbilt University, Washington University (St. Louis), Willamette University (Oregon), the state universities of Wisconsin, Wyoming and Nebraska, and Yale University, which offers in its Graduate School an advanced course called the "Self Perpetuation of Society." It is rather striking that amid all their rich offerings in the fields of history and sociology neither Harvard nor Cornell furnish courses definitely specialized with reference to the family institution. On the other hand a few of our normal schools are waking up to the need of such courses and they are already introduced into the State Normal Schools at Los Angeles, California, and Moorhead, Minnesota.

But the most significant thing is the fact that not one of the leading colleges for women is offering a course on the history and present status of the family. The young women of Smith, Barnard, Wellesley, Radcliffe, Mt. Holyoke, Bryn Mawr, Elmira and Goucher Col-

leges receive general instruction in economics and sociology and in some instances may even specialize on the "Labor Problem" or "Socialism" or "Charities and Corrections." But such enlightenment as they may get with respect to the social institution which most intimately concerns themselves comes more or less incidentally in connection with courses in sociology. Yet sooner or later each of these young women will probably be called upon to make up her mind on such questions as the causes and regulation of divorce, the part which women must play in the campaign against vice, the declining birth-rate, the tendency, in certain classes of our population, toward the postponement of marriage, the effect of modern industrial conditions upon the home—and a host of allied problems. Are we fitting our graduates to meet these questions with intelligence and in the open-minded spirit of the sincere student of social institutions?

THE TEACHING OF HOUSEHOLD MANAGEMENT

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We should think of Household Management as a survey course. The manager of the household needs a thorough knowledge of her home, a knowledge of all the activities within it, and a knowledge of all the relations of her home to the world at large.

Our oldest treatise on the subject, Xenophon's "Economics," shows how similar throughout the ages has been the work of the household manager within her home. Can anything express it more simply than his own words, "Whatever is brought into the house, you must take charge of it; whatever portion of it is required for use you must give it out; and whatever should be laid by, you must take account of it and keep it safe, so that the provision stored up for a year, for example, may not be expended in a month."

But this was written long before the materials for home consumption were manufactured outside of the home. A very different phase is added to our study of the subject now. One of the most interesting parts of our term's work at the Kirksville Normal, in the household management course, lies in the reading, the discussion, and above all the thought which makes a young woman realize the position in the world of the modern homemaker.

She then proceeds to study the management of the home. First, she becomes business manager. She has selected for her problem throughout the course, the study and management of a home for some family, preferably her own or one with whose income and conditions she is familiar.

She decides what standard of life this family has and gives such social facts about it as will determine whether money is spent to the best advantage. Next she plans or selects an appropriate dwelling, decides whether they should rent or own this property and enumerates its furnishings and their cost. She divides the family income, deciding what should be spent for food by planning and calculating the exact cost of two weeks' meals, and what should be spent for clothing by planning and calculating the cost of the wardrobe of each member of the family. She also plans and organizes the work of this family, deciding what household service is required and how it can best be secured.

Inquiry made in any class of our Normal School students will show that few have allowances or keep any record of their expenditures. Their mothers make similar statements for themselves when household accounting is discussed at their Home Economics club. They seem to feel that an allowance would be an insult. They know nothing of many of the household expenditures, for their husbands pay all the bills. They seem to prefer the position of dependence in financial affairs and state as proof of their wise buying, the fact that their husbands have never questioned the wisdom of a purchase.

The daughters of these mothers need more than a study of budgets and bookkeeping to convince them that the home needs business methods applied to it. Therefore, the students are asked to make arrangements for a definite allowance to cover some classes of expenditures for a month, and to keep account of this money for that length of time. A few usually can arrange to act as business managers of their homes during the month. Girls who board in the city apportion an allowance for themselves and keep such accounts without much difficulty. Others do light housekeeping and, as mistresses of their own homes, coöperate in this plan willingly. It is with these students that some of our most interesting work is done.

Frequently, the budget and the accounts cannot agree closely but this teaches the need of experience in apportioning incomes. As a

matter of fact a budget for so short a period can not represent the year but frequently interest is aroused to continue the work longer.

We use classified account books for keeping these records. One which can be recommended for the use of those keeping personal accounts is the Young Women's Christian Association account book which costs 15 cents and which is small enough to slip into a hand bag.

During the time that accounts are kept a study of class expenditures is made. Considerable discussion is devoted to the amount which is necessary in order to secure efficient living. Opinions vary but each student makes her own decision and apportions such an income. The same is done for a self-supporting woman.

Throughout our course we use for study the conditions of our own community as far as possible. We have interesting discussions of the cost of building certain houses in the city and of the cost of rents. The price of building lots in the different sections is found out. Next operating expenses are studied. What is the cost of gas, of electricity, of the heat furnished by the city heating plant? What are the available fuels and what their relative efficiency? This frequently calls for a knowledge of reading meters and a study of heating and lighting fixtures. The students are then ready to decide whether it is best to own property or to rent it in Kirksville.

In a similar manner they compare the cost of light housekeeping with the expense of board and room. The profit in keeping boarders is also reckoned.

In studying the cost of clothing each student makes a budget of her own clothes for one year. She also decides what furnishes a desirable wardrobe for student or teacher and what sum must be spent yearly for such wardrobes.

The expenditures for higher life offer opportunities for discussing the cost of a college or normal school education and of investments and ways of saving. We try to find what are some of the safe investments and what a reasonable rate of interest for such investment. The care of money resources requires also a knowledge of banking and of business forms.

For conclusions regarding domestic service, comparisons are made between the average income of the factory girl in Kirksville who receives \$5.50 a week, and the domestic employe who receives \$4 with

board. Factory service as compared with domestic service reveals advantages in each, and shows what is needed to improve conditions of household employment.

The household manager, however, must be the buyer of household supplies as well as the business manager and organizer of work. But first, since it is impossible to separate the organization of work from efficient execution, she must learn to select the equipment that will help most in performing the work she has organized.

What shall be the arrangement of stove, work table, cabinet, sink and ice box? What shall be their size and height? What materials should be used in their construction? How can we improve a kitchen improperly constructed? These are some of the questions the household manager must answer. She must then decide upon the labor saving devices, and tools which will help her in her work. Do they fill a need? Are they constructed on scientific principles and of durable materials? We study them by inviting agents to demonstrate them to us, by visits to the stores, by preparing exhibits of our own school kitchen apparatus and by posting on a bulletin board illustrations and descriptions of tools which should appeal to the household manager.

For selecting food the purchasing agent needs to know what the federal and state food laws require, and whether any municipal regulations protect food. She needs to cultivate the habit of measuring and weighing, of reading labels and learning trade names for good quality brands. One way of fostering this habit is to collect labels in a scrapbook or on a bulletin board, grouping together labels representing honest goods and those representing poor quality or adulteration.

The purchasing agent should also know what causes are contributing to increase the cost of living. How practicable are coöperative stores, coöperative buying in large quantity and buying direct from the producer? Perhaps the plan of some local store is worthy of her study, such as the one which can undersell its neighboring markets because it makes no deliveries.

Certainly she should know how sanitary are the methods of dealing with food in her city and what needs remedying. It is disgusting to notice the way many butchers, bakers, grocery men, fruit dealers and candy merchants handle the food they sell. A few appeals to the women of our city seem to have had little effect. Next term each

member of our household management class is to remonstrate with one dealer about this and to report her experience to the class.

Lastly the household manager needs to be supervisor of the industries and activities within her home as well as guardian of the materials which enter it. Hardly a treatise on Home Economics comes to us today without some reference to the changes in home industries. So many of the speakers at the Home Economics conference in Cleveland last summer referred to this that it became a joke and the later speakers apologized for this part of their papers.

Through courses in cooking, cleaning and sewing, students learn the home industries of today. In this, their survey course of the home, they acquire the foundations for scientific home management. But as the industries of old are passing from under their paternal roof, the homemaker of the future needs increasingly more knowledge of the materials made outside the home. As the Bruères say in their book on home efficiency, a lover today does not ask "Can you brew, bake or churn?" but:

Are you up on the pure food laws affecting the manufacture of canned soup?

Can you assure me that you know the conditions governing the sanitary production of pastry?

Can you bring enough influence to bear on public opinion so that the family clothing will not have to be made in a sweat-shop?

Do you know how to get honest government inspectors appointed, to assure me of the purity of the milk and butter you promise to serve me?

PRACTICAL APPLICATION OF TEXTILE KNOWLEDGE

CHARLOTTE GIBBS BAKER

Several years of study and experience in buying textiles makes one feel that every woman should have the knowledge which makes her an intelligent buyer, and the pleasure which comes from intelligent buying of fabrics; yet the same years of connection with a school system makes one realize the increasingly great number of things which must be crowded into the curriculum.

The study of textiles is greatly enriched by a background of history and art, as well as by botany and chemistry, and the subject itself leads us into sociology, economics, physiology and hygiene.

The grades, the high school, the college, do not give us time enough for the things we must know in order to be broadly educated, but since so large a per cent of our number are fortunate if they even finish the high school, we must do the best we can for them while they are with us. Usually textiles in the high school is taught in connection with sewing, and is given one or two recitation periods a week at most.

What then, from our field of textile knowledge, is applicable to this period of the student's training? Perhaps the most important thing, in the consideration of this subject in the high school, is the development of an appreciation of materials. The girl of high school age is intensely interested in clothes, she loves pretty things, and she is imitative. There is a real opportunity for the teacher who is capable of using this interest, and of developing it along right lines.

If the girl can be made to appreciate the beauty of good materials, to feel the pleasure of a little exquisite ornament, to experience the satisfaction to be had from an artistic garment, well made and suited to her needs, something worth while has been accomplished.

Novelty materials, extreme fashions, over ornamentation, are being exploited on all sides. The designer and the manufacturer are not helping us to become more sane in our personal adornment and in our homes. In a lecture by an interior decorator from one of our big furniture stores, the reason given for most methods of decoration was, "They are doing it this year," *they*, being, of course, the decorators. When asked for some real principle to explain a certain window treatment, his only resource was, "*they* are doing it." In the same way women of sallow complexion wear yellow greens, because "*they* are wearing them this season." Materials, fleeting in color, lacking in durability, but effective when new, are made into garments, because "*they* won't be wearing these tunics, or puffs or what-not long."

Because of rapidly changing fashions the demand for cheap materials is great. It becomes more difficult each year to buy wisely.

As it is impossible to see what the manufacturer will offer next, the best preparation for the buyer would be to make one's self familiar with the standard fabrics, with the materials and prices, which do not change rapidly, and then with the adulterations practiced; to study briefly the nature of the fibers used, their manufacture into

cloth, and the characteristics of the finished cloth. The amount of detail to be considered in these processes will depend somewhat upon the time allowed. It is not necessary for the average girl to understand the mechanism of gill boxes. She can, however, know that when cotton has been freed from seeds and dirt it is brushed into a thin sheet, somewhat like cotton batting, which sheet is condensed into rope; that this rope, after many drawings and twistings, becomes the fine yarn which is woven into cloth; that this yarn must be sized to hold it together in weaving. She may know the various weaves that are used, the method of finishing, including bleaching, dyeing and printing. It will be interesting to her to find out that the different qualities of cotton cloth are due to differences in quality of fiber, in twist of yarn, in amount of sizing, in kind of weave, in method of finishing, and that the price also varies with these things. In the study of linens, emphasis may be laid on the difference in the nature of the cotton and linen fiber. This difference makes linen so much more desirable for towels, table linen, etc.; makes it necessary to bleach linen in a different manner from cotton, if we are to retain its strength; and also accounts for the ease with which linens dye.

Wool, a fiber for which the demand is greater than the supply, is capable of adulteration in a number of ways. Because of the nature of the fiber, a great variety of materials may be made from it, and because of its durability the fiber may be used a second time. Woolens, worsteds, felt shoddy as well as mixed goods, must be studied in the manufacture and in the finished product.

Silk, by nature a long, fine fiber, requires but little treatment to produce a thread, but that must be done by skilled fingers. The practice of weighting silks is new to most women, who wonder why their silks wear shiny and crack before they should. If each fiber is studied carefully, its adulterations and imitations discussed and the pupil's interest thoroughly aroused, a beginning, at least, will have been made. Simple chemical tests to distinguish fibers may be shown by the teacher or made by the class. Burning tests, and tests by breaking the thread should be made.

The pupils should be encouraged to collect samples to bring into class, samples of materials which have worn well, and of those which have not.

Trips to factories are interesting and beneficial, as are trips to stores, and when possible, to art collections. A collection of good,

illustrative material should be made. The bargain counter should be discussed, and reasons given for marking down material.

In short, every possible effort is to be made in the given time to familiarize the girl with fabrics, and to develop an interest which may remain with her when she has greater opportunity for buying. In the end practice makes the good buyer, practice backed by knowledge.

The intelligent buyer should know something of color and design, and of the hygiene of materials. She should know that such an organization as the National Consumers League exists, and that there are child labor laws, and need for more and better laws, and especially for their enforcement.

Material for courses in textiles is not lacking. The teacher has opportunity to develop a very vital subject, a subject which has greater possibilities than have in all cases been realized.

MOLDS IN THE HOME

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The thrifty housewife instinctively dislikes molds and mildews, whether they occur on the bread in the breadbox, on the fruit canned for winter use or on the apples and vegetables stored in the cellar. They always seem to charge her with lack of care, even with slovenliness. She has learned by experience that molds thrive in dampness and in the dark, and that they are vanquished by dryness, air, and above all, by sunlight. She regards them as at least undesirable; she probably considers them to be dangerous to health, even poisonous. But in how many cases does she know what a mold really is, or in what ways it may directly affect the health of herself and family?

The molds met by the housewife are in a very real sense to be regarded as weeds, for they are truly "good plants out of place." Plants they certainly are, for the botanist tells us that they grow from minute beginnings, produce seeds (he calls them spores), and die. To be sure, the microscope shows them to be tiny plants, but are they "good plants out of place?" Strange as it may seem, the benefits produced by molds in their growth in nature far outweigh the damage in the home. They are always actively at work in the soil,

decomposing plant and animal remains, and through them enriching the soil. Molds and bacteria working together are responsible in large measure for soil fertility, for the ability of the soil to produce abundantly. The sterile, infertile soil harbors few or none of these microscopic plants; in the fertile, productive soil, they are present in great numbers and in endless variety. Useful as they are in the field, however, we can agree that they are out of place in the home; our point then is established, the molds are the weeds of the household.

The botanist who has studied the molds will tell us that several thousand different kinds have been described, of the most varied shapes, sizes and colors. The prospect of any person other than a specialist knowing and recognizing any considerable number of these forms is evidently remote, but that should not discourage us from making the acquaintance of some of the commonest among them, or at least from being able to recognize several at sight. The fact that there are thousands of kinds of flowering plants in our country does not prevent us from knowing the ones that grow in our garden or in our dooryard. Nine-tenths of the molds that are met in the home belong to a very few (not more than half a dozen) distinct types. Most of them can be recognized as readily at a glance as the pigweed or the purslane of the garden. One does not need to know the scientific name of a plant to be on familiar terms with it; the common name serves just as well. Unfortunately common names have been given to a very few only of the molds, and the Latin names must perforce be used. But these should not bother one, none are as awkward as *hippopotamus* or *rhinoceros*.

All molds are made up of a mass of more or less tangled and branched threads. When young, that is, before they have begun to fruit they often resemble each other as closely as do different kinds of grass before the flowers and seeds appear. Very soon they produce special branches which in time bear spores. These spores serve the same functions as do the seeds for the corn or the oak; they differ from seeds in being extremely small and much simpler in structure. When they fall upon a favorable spot they germinate and form a new plant or mold. When in fruit the molds can usually be identified easily. Anyone who possesses a good microscope will find a study of these forms a most fascinating pursuit, for many of them are exquisitely beautiful when viewed under the lens.

Three-fourths of the molds observed by the housewife are green, or bluish- or yellowish-green. The great majority of these belong to one general type. They are the ones that produce the green or bluish velvety areas upon lemons, oranges, bananas, apples and other fruits, that thrive on the surface of preserves and canned fruits imperfectly sealed, or that are common on bread and pastry; in fact it is difficult to name a food substance upon which they will not appear in time. For lack of a better designation they are sometimes called the blue-green molds, although they are often deep olive, light green, even yellow, orange, brown or white. The botanist calls them *Penicillium*, meaning a little brush. The microscope shows many erect, slender threads, branched, and with chains of tiny spores projecting from the tips of the branches, the whole having the appearance of a broom or brush, whence the name. These spores are easily detached and blown about by every breath of wind. They are everywhere present in dust, and always ready to begin growing when opportunity offers.

A second mold that is relatively common is the *Mucor*, sometimes termed the black bread mold. Everyone has seen the masses of cobwebby white mold that appear on stale damp bread and on decaying vegetables such as sweet potatoes and squash. Careful inspection even with the unaided eye will show the presence of minute black dots here and there on the tips of the erect threads. The lens shows these black bodies to be spherical cases filled with brown or black spores. When touched, the outer wall of the case is shattered and the spores are freed, ready to grow in the presence of moisture and food.

The third mold, somewhat less common than the preceding, is *Aspergillus*. At first glance this has somewhat the appearance of the *Penicillium*, but is rarely green; usually the body of the mold is white and the spores black or of some bright color. The stalks which produce the spores stand erect, each with a swelling or bulb at the tip. Tiny protuberances grow out from this bulb until it is studded over with spikes like an old war club. From the tip of each of these spikes are pinched off spores one after another; these cling together in chains. A view of the whole reminds one of the long handled fans seen in Egyptian carvings. Under the microscope they appear as forests of palms with clusters of radiating leaves at the extreme tops of the long naked trunks.

One other mold, the *Alternaria*, a brown form, is common on decaying starchy foods. It is not a conspicuous mold to the unaided eye, but under the microscope is one of the most beautiful. The spores in this form are brown, clubshaped and produced in long chains.

Molds are not always undesirable in food. Some of our most delicious cheeses, such as the Roquefort and Camembert, for example, owe their texture and flavor to the growth of certain kinds of *Penicillium*. Usually, however, they are undesirable. They spoil flavors, destroy texture and probably in some cases even poison foods or other materials on which they grow, and they are regarded as being in some obscure manner generally "unhealthful."

The fact that molds spoil the flavor of foods in many cases cannot well be denied, in fact this is the most important source of loss and annoyance from their growth. But more important still is the fact that some of them produce substances that are definitely poisonous. Just what these poisonous substances are is not known in all cases. One that has been definitely shown to be present in some instances is oxalic acid, a deadly poison when eaten in any considerable quantity. Moldy silage and moldy hay have repeatedly been shown to be fatal for horses; the evidence is not quite so positive regarding poisoning from moldy food in man, but is sufficient to show that every precaution should be used to avoid eating such food. Quite as important is the fact that breathing the dust or spores from moldy material may be directly injurious to health. Fortunately many kinds of mold spores are not dangerous to man, but many cases are on record of infection of the lungs with *Aspergillus*. This occurs very commonly indeed in lower animals and particularly in birds fed on moldy food. It is evident that every reasonable precaution should be used in eliminating such molds from our food and from the home.

NEW YORK'S PUBLIC MARKETS

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New York City has the reputation of being a city where living expenses are high. Rents would naturally be high because of the small size of the island on which the city is built, but there would seem to be no reason for high food costs in a city which receives, by

land and by sea, such large shipments of food from all parts of the world. Food is low in price, investigators tell us, when it reaches New York, but by the time it is received by the consumer it is high in price, for New York has the poorest market system of all the large cities of the world. It is so poor that out of each dollar that the consumer pays for food, thirty-three cents goes, not for food, but for the expenses connected with its handling and sale.

The retail public markets in the city until recently have been few and inaccessible; practically all purchasing had to be done at the small retail stores with their high "overhead charges," except in certain parts of the city where pushcarts were allowed.

Last August Mayor Mitchel appointed a Food Supply Committee with George W. Perkins as Chairman: this committee immediately became very active, as did also the Committee on Open Markets which had been previously organized with Borough President Marks of Manhattan as Chairman.

Four places in the city were opened September first as temporary open markets to which any farmer or dealer could come, without expense, for the purpose of selling his goods directly to the consumer. The plan, however, has apparently not as yet appealed to the farmers as much as to the purchasers, for ordinarily there have been only thirty or forty farmers' wagons among the thousands of wagons and stands belonging to city hucksters and dealers.

One of the markets which was located on the lower East Side was not successful, largely, it is felt, because it was in competition with the pushcarts rather than with the retail stores with their high operating costs. The other three markets have continued to flourish in spite of many handicaps. It was estimated that about 100,000 people were coming to the three markets on each of several days in the week, in January, the fifth month after their opening. This number represents a regular increase from the beginning and would seem to promise a much larger attendance during next spring and summer.

The markets themselves have been very crude affairs; each seller displays his goods according to his own individual tastes, with the exception of meat and fish which are required to be kept covered. The Fort Lee Market is a busy trading center and has appealed to the dwellers in the apartment houses on Riverside Drive as well as to the tenement dwellers of Harlem. One of the chief attractions is its nearness to the quay at which fishing boats sell their fish, a few hours from the water and very cheap.

A liberal education in food selection is given to its patrons by the free market, if they will take advantage of the opportunities. In one of the markets, for instance, in October over fifty different kinds and varieties of vegetables were displayed, and as many fruits. There are also many different grades of the same article distributed through the market, and the housewife soon learns not to depend upon the judgment of the individual dealer with reference to his own wares, but to go from place to place until she can decide where it is best to buy. A skillful buyer who knows how to judge relative values would have plenty of chance to find bargains at the market, but there is need for a background of knowledge if full advantage is to be taken of the opportunities offered.

The saving in food costs has, of course, been chiefly instrumental in making the markets successful. Butter, eggs, meat and poultry have been selling in the markets for between 10 and 20 per cent below the prices asked in the retail stores. Potatoes cost about 25 per cent less, that is, when they are selling at fifteen pounds for 25 cents in the stores, they can be purchased at the market twenty pounds for 25 cents. On onions, cabbages, beets, apples, bananas and lemons, a saving of fifty per cent has been frequently reported. The average saving on a list of 34 articles upon which store and market prices were collected, was 38 per cent, the range of saving being from $12\frac{1}{2}$ to 60 per cent. One woman who traded at the Fort Lee Market for two months, during which time she kept itemized, comparative accounts, found that she had saved from two to three dollars a week on her food purchases, and at the same time had been securing very fresh goods of excellent quality.

The question of delivery from the markets has been a difficult one to solve and at present it is being solved by the individual purchasers rather than by the market itself. At first, arrangements were made with various privately operated delivery systems, to carry packages from the market for a small fee to be varied according to the size of the bundle and the distance over which the goods were taken. It was soon found, however, that people who lived near by preferred to carry their own goods home and save the money, even though it meant several trips with the help of all their children and their neighbor's children who were large enough to have ability as "carriers." A baby carriage made a good market basket as did also a child's express cart or a wooden soap box mounted on roller skates. The most

popular article for this purpose proved to be a large black bag which was sold in the markets by peddlers, often at the rate of two hundred a day. Under these conditions, delivery systems were not patronized except for large and heavy bundles taken for long distances; this was not a very profitable line of business and the private delivery systems are no longer found at the markets. Instead, if you do not want to do your own delivering, your only recourse is the huckster who is willing to bring your package "on his way home" for a small remuneration.

As will be seen from the above descriptions, New York's free markets are for those who have the time and the strength to "go to market" and bring their purchases home. The actual time required to buy in these markets is usually greater than in the retail stores and several trips are often necessary to make purchases which would be made at once if delivery were possible. Greater skill is often required in order to secure goods which are up to a certain standard, than if dependence for selection is placed upon a well-trained clerk. You save at the markets in actual dollars and cents, but you do not have the benefits of deliveries, of buying many different kinds of goods in a single order, of refunds if goods are not satisfactory, of credit, of quick emergency service, and of immaculate cleanliness in the handling of foodstuffs—all of which we can get in the ordinary retail store if we are willing to pay the price.

The free markets have been worth while in New York, if for no other reason than that they have aroused public interest in what can be easily and quickly done in reducing food costs. However, much besides the establishment of free markets is needed before the food costs of *all* the people can be reduced, and under the new Market Commission attention is being given first to the reduction of waste in the wholesale handling of foods as they come to us from outside, as it is felt that here perhaps most can be done of really universal value. Then attention is to be given to building up the food supply marketed here, to arranging for a better plan of local distribution in the city, and for less wasteful retailing methods. Previously but little serious thought was given to the establishment of many retail markets throughout the city, as it was felt that they would not be sufficiently well patronized to pay. The present experimental markets have at least shown that great numbers of people in New York are willing to sacrifice time and convenience and to purchase regularly

at an open market if they find there good food at low prices. Doubtless future market plans for the city will lay far greater emphasis upon the retail markets than if this attempt had not been made. Whether or not the markets become permanent institutions they certainly have been of tremendous value in reducing food costs during the present time of serious unemployment and unsettled financial conditions. Much credit should be given to them for this reason if for no other.

FEDERAL AID FOR VOCATIONAL TRAINING: THE SMITH-LEVER AND THE SMITH-HUGHES BILLS

A. C. MONAHAN

U. S. Bureau of Education

Much confusion has been created by the two measures which have been before the U. S. Congress during the past half dozen years proposing Federal aid to assist in education in agriculture, household arts, and the trades which are closely related to each. The confusion has been due largely to the similarity in the names of the bills and to the fact that the provisions of one were at one time included in the other. These two bills are the Smith-Lever Bill, introduced into the Senate by Senator Hoke Smith of Georgia and into the House by Representative Lever of South Carolina, and the Smith-Hughes Bill, introduced by Senator Hoke Smith and Representative Hughes, both of Georgia. The Smith-Lever Bill has been enacted into law, being approved by the President on May 8, 1914. The Smith-Hughes Bill was before the 63d Congress, which ended March 4, 1915, but received little consideration on account of many other pressing measures which took the time. It undoubtedly will be re-introduced in the 64th Congress at the proper time.

The Smith-Lever Bill provides Federal aid to the State Agricultural Colleges for coöperative agricultural extension work with the U. S. Department of Agriculture. By extension work is meant giving instruction and practical demonstration in agriculture and Home Economics to persons not attending or resident in the Agricultural Colleges. This work is given in various communities throughout the states through farmers' meetings and organizations, county extension agents, field and house demonstrations, boys' and girls' clubs,

"movable" schools, and in other ways usually understood to be included under the term of extension teaching.

The Smith-Hughes Bill would provide Federal aid to coöperate with the various states in the maintenance and support of vocational schools of agriculture, Home Economics and the trades and industries for persons 14 years of age and over, and in the maintenance and support of schools for training teachers for the vocational subjects in these vocational schools. This would provide vocational education in regular day schools of high school grade and part-time day schools for youths not employed, and in continuation courses in evening schools for youths and adults regularly employed.

The Smith-Lever Bill provides \$10,000 annually to each state for its Agricultural College beginning July 1, 1914. For the year beginning July 1, 1915, it provides \$600,000 additional to be allotted to the various states in the proportion which the rural population of each state bears to the total rural population of the United States; and for each succeeding year for seven years, an additional amount of \$500,000 allotted on the same basis. By July 1, 1923, this will amount to an annual appropriation of \$4,100,000 in addition to the \$10,000 to each state. None of this amount will be paid to any state (excepting the \$10,000 annually) unless the state makes an equal appropriation. Both the fund received from the Federal Government and the equal fund from the state government to balance it must be expended on extension schemes approved by the U. S. Department of Agriculture.

The Smith-Hughes Bill would provide three separate appropriations any one of which a state might accept, the first for the training of teachers of agricultural, trade and industrial, and Home Economics subjects; the second for agricultural education, including Home Economics; the third for education for the trades and industries. The amounts proposed are as follows:

For the training of the teachers, \$500,000 the first year, increasing to \$700,000 the second, \$900,000 the third, and \$1,000,000 the fourth and each succeeding year; to be divided among the states in the proportion that their total population bears to the total population of the United States.

For education in agriculture (including Home Economics) \$500,000 the first year with an annual increase of \$250,000 for six years, followed by an annual increase of \$500,000 for two years at which

time the appropriation would become \$3,000,000 which amount would continue as an annual appropriation to be divided among the states in the proportion which their rural population bears to the total rural population of the United States.

For education in the trades and industries, an amount equal to that proposed for agriculture; to be divided among the states in the proportion which their urban population bears to the total population of the United States. It is understood, of course, that women's trades and industries, including household arts and Home Economics, may be included under this appropriation.

None of the moneys might be used for building and equipment purposes, but must be used for salaries only. In order to receive any part of these appropriations, the states, or local communities in the states, would be required to appropriate an equal amount to be expended under the same conditions as those governing the expenditures of the Federal appropriation.

The original bill proposing Federal assistance to the extension teaching in Agricultural Colleges was introduced by Congressman McLaughlin of Michigan about six years ago. The original bill proposing assistance to the states for vocational schools was the Davis Bill introduced by Congressman Davis of Minnesota a few years previous to the introduction of the McLaughlin Bill. In 1910 these two bills were united into one known as the Davis-Dolliver Bill and this was succeeded in 1911 by the Davis-Page Bill, which still included the provisions for extension work. During the 62d Congress, this was known usually as the Page Bill. While the Page Bill was before Congress, the Smith-Lever Bill was also under consideration. Special confusion resulted because the Page Bill, in addition to its other features, provided for Federal aid for the same purposes as were provided by the Smith-Lever Bill. The Smith-Lever Bill was finally passed, as has been stated, and approved May 8, 1914. This made it necessary to recast the Page Bill. Early in January, 1914, Congress passed a resolution authorizing the President to appoint a Commission on National Aid to Vocational Education, which Commission should investigate the subject and report back to Congress. The President appointed a Commission of nine persons, consisting of two senators, two representatives, and five other persons not connected with Congress. Smith and Page were the two senators named. The Commission organized April 2, 1914, with Senator Hoke Smith as

Chairman. It made an investigation and submitted a report to Congress on June 1, 1914, which was the date set for the report by the resolution of Congress. The report is in two volumes of practically 400 pages and is printed as a Congressional Document, entitled *Report of the Commission on National Aid to Vocational Education*. In Vol. I of the Report is included a bill prepared by the Commission incorporating its recommendations for Federal aid. This bill was introduced by its Chairman, Senator Hoke Smith, and by the Chairman of the Education Committee of the House, who was also a member of the Commission, Representative Hughes, and takes its name from them. The Smith-Hughes Bill is the unanimous recommendation of the Presidential Commission on Federal Aid to Vocational Education.

FANNIE MERRITT FARMER

ANNA BARROWS

Miss Fannie Merritt Farmer died in January, 1915, in Boston, where she was born less than sixty years ago.

The family plan was that this oldest daughter should go to college, but in the senior year of her high school course, she suffered a shock of paralysis which led to the physician's veto on further schooling.

As health returned she naturally assisted her capable mother in the home and became especially interested in cookery.

In 1889 she was graduated from the Boston Cooking School and returned to the same school the next year as assistant to Mrs. Carrie M. Dearborn. As opportunity offered she studied in different directions, among others taking a summer course at the Harvard Medical School. After Mrs. Dearborn's death a few years later, Miss Farmer was chosen Principal of the school and held the position for thirteen years, when she resigned to open her own school which has been in existence eleven years and probably will be continued under her name by some of her pupils and assistants.

During this teaching period of nearly a quarter of a century, Miss Farmer sent out many efficient women as teachers in public and private schools and as dietitians in hospitals, and they are to be found from Montreal to Denver and beyond.

Her school was especially headquarters for hospital lecturers on invalid cookery; nearly twenty New England hospitals were on the

list. To these hospitals, Miss Farmer and her assistants went yearly for short courses with the nurses. There was also a constant call from the women's clubs for courses or single demonstration lectures. The weekly demonstration lectures at Miss Farmer's School were attended by large numbers of ladies and reports of these lectures were widely copied from the Boston papers.

Ten or twelve years ago Miss Farmer went to the Pacific coast, visiting her graduates en route and giving lectures in twenty-five or more of the principal cities.

Large as is the number who came in personal contact with Miss Farmer's careful work through her school and lectures, a still greater number knew her through her helpful books. The twenty-first edition of the "Boston Cooking School Cook Book" is now in press; the edition often has numbered 50,000.

Her other books have also been well received. Among these was one on the use of the chafing dish, "What to Have for Dinner," "Catering for Special Occasions," "Food and Cookery for the Sick and Convalescent," and "A New Book of Cookery."

For nearly ten years, assisted by Mrs. Perkins, her sister, Miss Farmer conducted a popular department in the *Woman's Home Companion*. This is one of the longest periods known of the continuous conduct of such a page and proves its acceptability to publishers and the public.

EDITORIALS

Teaching Home Economics. A high school teacher of Home Economics, asked to state the problems of her field, made the following reply:

First of all it is an applied science field, which means that you are expected to be scientist and technician also. But your subject is the application of several sciences, not one alone, and art and ethics as well. You must give to girls who will never go to college the application of principles and details to the ordering of a household, and you also may have to teach all that is taught regarding food, clothing, and shelter.

More than that, you will meet the necessity for expert technical knowledge of all sorts and for executive ability in organizing practical instruction in a wide field. Further, not being engaged in the profession of home-making yourself, you are likely to get out of touch with changing conditions and so lose facility and skill. You are to work in a field, too, in which problems have as yet been worked out imperfectly or not at all, and in which sources of information are widely scattered, often practically inaccessible to one who has not the best of libraries and much time for study.

This picture of difficulties in teaching Home Economics every thoughtful critic will acknowledge is not over-drawn. The important thing is for the Home Economics teacher to realize these difficulties and react to them vigorously. On the practical side, much is possible. The teacher must reach into the homes of the students for real problems and send them back there to make practical application. She must also keep on the look-out for new facts and master them as soon as they are collected—one JOURNAL reader reports to us that the article on losses of mineral matter in cooking vegetables in a recent issue has changed theory and practice for her. The teacher must obtain for herself opportunities for actual housekeeping in vacation time, if she can not during the year, and she should realize that in the conscientious teaching of her subject, even with her present deficiencies, there is community benefit that should challenge her best effort and give her a solid satisfaction.

But there remains a greater difficulty. The teacher of Home Economics who is honest and thorough in her mental processes is filled with despair at times as she reflects how superficial is her grasp of the fundamental sciences on which the improvement of the practices of every-day life is based, these practices which we are trying to raise to higher standards. But the same is true to a degree of all those who work in applied science. The physician who meets in his practice diseases whose diagnosis and treatment call for knowledge that does not exist can only try with intelligence some more or less doubtful measure while he urges on his brother of the laboratory greater diligence in his search into physiological conditions and new means of cure. The sociologist, however deeply read in the history of conditions in the past, and using the most modern methods of survey and classification, is painfully aware that the knowledge he has to apply, let us say, to the great problem of unemployment, is far from complete; the engineer who has graduated at one of our best schools realizes as he meets the varied conditions of his profession that there are problems on which he can find little help from his own experience or the ordinary source of reference. The idea before all of these men—the physician, the sociologist, and the engineer—is to do one's best, turning whenever one can to the source of such knowledge as is available, the hospital, the post-graduate department, the convention or annual meeting, the new and authoritative text-books, and the periodical literature of the subject.

This constant return to the sources of knowledge is, however, only practicable when there is already firm ground under the feet, when principles have been grasped and their application well studied; when there has been thorough training not alone on the technical side, but in the foundational exact sciences. Only such preparation can give a basis of progress for the future career.

There is every reason to hope that it is to be the rule and not the exception that teachers of Home Economics are to have this deep and broad training; they may have it now, indeed, if they are willing to make the sacrifices to gain it. As we look back ten years, we see that our schools of instruction have made vast improvement in methods and in subject matter. But unfortunately the demand for teachers has been greater than the supply, and now the requirements of the Smith-Lever bill are close upon us, still further emphasizing our lack. As a result, a normal and healthy development of the

movement has been rendered difficult, and young people in many cases have been drawn into a career, not only without thorough training, but also without the consciousness of their deficiencies. Without that consciousness, without firmly fixed standards, how are they to direct their later course of study? Must not the leaders of this movement in season and out of season call for better equipment in all training schools, more time given to the study and a frank and fearless facing of present deficiencies?

The Domestic Service Question. The Y. W. C. A. of New York, has entered upon a systematic inquiry into the conditions of domestic service. They sent out an all-embracing questionnaire and the returns will be discussed at the Y. W. C. A. national meeting in May. A few of the questions are here reproduced.

1. Is there among the housewives of your community any general dissatisfaction as to the present conditions in domestic service? If so, what are the reasons most often given for this condition?

2. Do you know if there is general or any dissatisfaction among the domestic servants of your community? Have you ever heard what reasons are most often given for this? What do you consider is the reason?

3. Has there been any effort on the part of the women in your community (either in individual homes or by any organization) to regulate, improve, or make any change whatever in the conditions of domestic service? If so, what has been attempted or accomplished?

4. Do you believe there is any possibility of placing domestic service on a footing parallel with other industrial occupations for women?

5. Has there ever been any discussion of such points as hours of work, free time, vacation, training, promotion, wages, place of living, social life, etc.; or any agreement between the housewives of the community on such matters?

6. Have any organizations in your community ever been interested in working out a plan of this character? Can you give any details of failure or success and the reasons assigned?

7. What do you believe we can or should do to better this special line of household administration?

Reprints. Many calls have been received for material concerning the work of the Visiting Housekeeper. In our April JOURNAL we printed a number of papers on this subject and now have these papers in a single reprint which may be obtained for 15 cents. It is listed with all other reprints in the back of the JOURNAL.

HOUSEKEEPER'S DEPARTMENT

TEACHING WOMEN HOW TO BUY FOOD¹

EMMA WINSLOW

The Mayor's Food Supply Committee at first devoted its attention to investigating the cause of the sudden rise in the price of food-stuffs. Public hearings were held and much publicity was given to the testimony offered. Little evidence was found, however, of any combination formed for the purpose of securing higher prices for certain staple foods. The work of the Committee then became largely educational for it was felt that perhaps the greatest immediate benefit could be secured if people were trained in "How to Buy." A series of leaflets on the subject were prepared and have been distributed through the public schools, settlement houses and women's clubs.

The first leaflet gave general buying directions, placing the emphasis on buying for cash, buying in large quantities, and buying "where you can do best." Low price, we were reminded, does not always obtain good quality or full weight, and it is well to buy for quality and quantity.

The next bulletin was on the buying of beef. It contained a diagram of the beef and a list of the different cuts and their prices. Suggestions were made as to ways of using the less expensive cuts and advice was given concerning the selection of good beef. At the bottom of the page was printed in large type "You work hard to earn a dollar. Use the information in this circular to help save part of that dollar."

The selection of vegetables was next considered, in both a circular and a special pamphlet, "Preparation of Vegetables for the Table." The use of other meats has been also taken up, the use and selection of fish, the use of left-overs, and the meat substitutes. All of these bulletins may be secured free of charge by addressing Mayor Mitchell's Food Supply Committee, City Hall, New York City. Additional bulletins are in preparation dealing with other phases of food buying, and will be sent out on application when published.

¹ See also page 241.

These "buying leaflets" have been prepared especially to meet the local needs, but much that is contained in them is of universal value. The interest shown in them here would certainly indicate that it is a line of instruction upon which more and more emphasis should be laid in Home Economics teaching.

BUYING THE REFRIGERATOR

At this time of the year comes up the question of the new refrigerator. Of what make shall it be? What are the principles that underlie its construction? What shall be its lining? Is the cheaper "ice box" to be considered?

An excellent authority on the subject of kitchen equipment, Miss Helen Louise Johnson, says:

An ice box is merely a receptacle for ice around which the food is placed and that gives no opportunity for circulation of air. Therefore it is wasteful of both ice and food material. But when we come to the matter of air circulation we meet a principle of physics whose application is little understood by some housekeepers. . . .

The aim of refrigeration is the keeping of food—not ice. This is done by retarding the action of the inevitably present bacteria. . . . There are two factors required for this, one, low temperature, the other, dryness. The low temperature is attained by the use of ice and maintained by means of insulation; the dryness is a matter of proper circulation of air in the refrigerator. . . . To be efficient, the refrigerator must not only produce and maintain a low temperature, it must also have a good circulation. The objects in view are accomplished best, in all probability, when the ice compartment is at one side rather than extending over the entire top of the box. The cold air should be carried to the bottom of the box, that is, it will fall underneath the ice before it rises, and then it should travel to the top of the refrigerator before passing again over the ice. Therefore, if the openings are not sufficiently large at both top and bottom to permit free passage of air the efficiency is reduced.

Insulation. The lining should be noted with care. There are many good linings now made, but the chief points to note are absence of any possible place where bacteria can lodge, or that might be difficult to clean. The food chambers must be lined with a smooth, hard, non-rusting material, easy to keep clean and sanitary in every respect. Metal, unless protected by porcelain, is not to be recommended for the lining of the food chambers, although it is required in the ice compartment. Paint cer-

tainly is quite out of place, and so the many different kinds of glass and porcelain linings should be studied.

Sanitation. The last point is the drain pipe, a matter requiring care and attention if the sanitary condition of the refrigerator is to be kept at the highest. It should be provided with a water-sealed trap to prevent the entrance of sewer gas, or warm infected air or insects. It should be so made and placed that it is easily accessible and may be removed for cleaning.

Running the refrigerator. There should be a metal lined compartment for ice and this should be kept practically filled. Like a kerosene lamp, the device will yield the best result when kept full. When the ice chamber is refilled only after all the ice has melted, there is a fluctuating temperature most injurious to the food. When a good-sized refrigerator is purchased, having an ice compartment with a capacity of fifty or seventy-five pounds of ice, and the user provides only fifteen or twenty pounds at a time, she must not complain about the efficiency of the refrigerator, for it is her ignorance of how to use it that is to blame for the result. Keep the ice chamber well provided with ice, and never place anything but *ice* in the ice chamber. . . . One cannot buy a really good refrigerator for a cheap price.

For a cheap, sanitary refrigerator built according to scientific principles, we would refer our readers to the article on Refrigerators by Hermann T. Vulté which appeared in the JOURNAL, April, 1913. A reprint may be had for 5 cents.

WHEAT SUBSTITUTES¹

Scientists in the United States Department of Agriculture suggest that if wheat remains at its present high figure or continues to rise in price and if there is a corresponding increase in the price of bread, the ordinary household will find it advantageous to eat more potatoes and less bread. With potatoes at 60 cents a bushel, ten cents worth—or ten pounds—will give the consumer a little more actual nourishment than two one-pound loaves of bread at five cents each. The protein and fat are present in appreciably larger amounts in the bread, but the potatoes will be found to furnish more carbohydrates, and more heat units.

Like other foods relatively rich in carbohydrates, however, pota-

¹ Office of Information, U. S. Dept. of Agriculture.

toes should be eaten with foods correspondingly rich in protein, such as milk, meat, eggs, etc., and with foods like butter, cream and meat fat to supply the fat that the body needs.

In addition the potato, like many vegetables and fruits, helps to neutralize an acid condition in the body. This is another reason for its being eaten in combination with meat, fish, and other animal foods.

Suppose a shortage in wheat should develop in the next three months, what would be the situation? There is a great surplus in other food crops in the United States, a number of which can be used as substitutes. Wheat does not constitute more than 12 per cent of the normal diet, about the same as poultry and eggs. Meat and dairy products constitute 48 per cent; vegetables 11 per cent; fruits, nuts, sugar, fish and other items, the remaining 19 per cent. There were larger supplies of corn and other grains, meat animals, dairy products, potatoes, and fruit at the opening of 1915 than for many years. The potato production in the United States averages 3.8 bushels per capita. This year the available supply is 4.1 bushels. The average price of meat animals was 7 per cent cheaper in January than a year ago, butter 2 per cent lower, the price of chickens slightly lower, of potatoes 35 per cent lower; and of apples it was 37 per cent lower.

It would seem that the United States is not likely to be threatened with a shortage of foodstuffs. The increased cost of living throughout the world has emphasized the fact that flour made of other substances than wheat, or of these substances mixed with wheat, might provide people with healthful food quite as nutritious as the pure wheat flour, and at the same time cheaper.

Austrian bakers are now compelled by law to use at least 30 per cent potato-meal in making their bread. The Bureau of Chemistry's potato-meal bread has been baked with from 25 to 30 per cent potato-meal and the remaining percentage wheat. The most satisfactory loaves in combining economy and appearance were those made with the minimum percentage allowed in Austria or less.

The question has been raised as to whether the ordinary cooked potato might not be satisfactorily substituted for the prepared potato-meal. The experimenters believe that it might serve the same purpose if used in just the right proportion, but this would be difficult for the average housewife to determine as there is great

danger of using too much and producing a very soggy loaf. However, the custom of adding a very little potato is already used by many housekeepers to keep their bread moist and this practice can very well be recommended for more general use.

SOME EXPERIMENTS IN PRESERVING EGGS IN WATERGLASS

ANNIE L. WING

For the last ten years I have been preserving eggs in waterglass with satisfaction and profit, putting down from 30 to 180 dozen at a time. I have frequently varied the amount of waterglass, with results that seem to me of sufficient importance to warrant my writing about them, especially as I have seen no record of similar experiments.

I began with the United States Government rule of 10 per cent, and have gradually lessened the strength of the solution, with increasingly good results, until for the last five or six years I, and a number of friends through me, have settled, some on 4 per cent and others on 5 per cent, and have put down successfully in this way over 1000 dozen. I tried one dozen in a 2½ per cent mixture and opened them a year from that day, to find them perhaps the most nearly perfect of all.

It is good to hear of such experiments on the part of the housekeeper, but a caution must here be noted. The condition of the egg when put into the preservative is of great importance. An egg placed in a clear cool container directly after it is laid will keep for a long time without the help of any preservative. Probably the use of 10 per cent of waterglass, as in the United States Department of Agriculture recipe, is considered the only safe mixture to be used to preserve ordinary commercial eggs that have been perhaps soiled in the nest or whose exact age may not be known. For the method of using a 10 per cent solution see the June (1914) JOURNAL, page 290, or Farmers' Bulletin 128, United States Department of Agriculture.—EDITOR.

MENUS AND COST IN A COLLEGE PRACTICE HOUSE

A description of the management of the Mississippi Practice House for Students which appeared in the December (1914) JOURNAL called forth inquiries as to the low cost of food. These prices will not seem impossible when it is remembered that some of the pro-

visions were bought at wholesale prices from the college storeroom or secured at reduced rates in other ways that might not be possible for the ordinary family.

In their reports for 1913 the \$1.84 given as the greatest amount spent per person per week for food did not include the cost of fuel used in cooking it. Some typical menus are given:

BREAKFAST				BREAKFAST			
Shredded Wheat			Cream	Baked Apples			
Bacon		Fried Apples		Cream of Wheat			Cream
Bread		Butter		Light Omelet			
	Cocoa			Toast	Butter		
					Cocoa		
LUNCHEON				LUNCHEON			
Escaloped Potatoes				Pork and Beans			
Peanut Butter Sandwiches				Potato Salad			
Bread		Butter		Bread	Butter		
	Apple Whip			Preserves		Iced Tea	
DINNER				DINNER			
Cream Tomato Soup				Vegetable Soup			Croutons
Baked Fish				Broiled Meat Cakes			
Corn Pudding		Peas		Creamed Asparagus			
Bread	Butter			Candied Sweet Potatoes			
Jellied Vegetable Salad		Crackers		Bread	Butter		
Orange Bavarian Cream				Pickles			
Cake	Coffee			Fruit Salad		Crackers	
				Sponge Cake		Sauce	
					Coffee		

More inclusive figures have been received recently and are here quoted.

November group (11 persons) November 1 to 30, 1914

Groceries and meat.....	\$84.20
Milk.....	8.50
Lights.....	4.50
Gas.....	1.12
Laundry.....	11.00
Coal.....	6.00
Total running expenses per month.....	\$115.32
Total expenses per person per month.....	\$10.48
Total expenses per person per day.....	.34
Total expenses per person per week.....	2.38
Food (groceries, meat and milk)	
Food per person per month.....	\$8.42
Food per person per day.....	.28
Food per person per week.....	1.96

Coal used for cooking dinner, and sometimes for breakfast. Gas for breakfast and lunch.

Laundry includes personal and house laundry done by the college steam laundry.

April group (11 persons) April 1 to 30, 1914

FOOD ACCOUNT	
Groceries.....	\$74.46
Milk.....	5.95
	<hr/>
	\$80.41
Per person per month.....	\$7.31
Per person per day.....	.24
Per person per week.....	1.68

Some of the menus given were used in this month.

About one-half the groceries were bought at the college dormitory store room where a wholesale price is obtained. The other groceries were bought from grocers and such reduction obtained as possible—canned goods by the case, perishable goods in small quantities, and bread from college bakery, wholesale, $2\frac{1}{2}$ cents a loaf. Oleomargarine was used for cooking, good butter for table; Wesson oil for salad dressing.

SHALL THE BUYER DEMAND DRAWN OR UNDRAWN POULTRY?

The answer to this question once seemed easy. Drawn, of course. It was not pleasant to think that the intestines wholly or partly full of undigested and faecal matter should remain longer than necessary in the fowl destined for our table. If the fowl is brought to our door by the countryman who raised and killed it, it would seem that it should be brought dressed, that is, head, feet and intestines removed, and the liver, fat and cleaned gizzard returned to the body cavity. The price would in this case be for net weight, for the proof of what was the weight before dressing is not in evidence. This would seem the most satisfactory way of buying anything, but the countryman tells us that the buyer shows a strange reluctance to pay the added price per pound over what is asked for undrawn.

Complications arise when we consider the question of "market" poultry. The U. S. Bureau of Chemistry undertook in 1910 a six

months' study of all the factors involved, and the report is to be found in its Bulletin No. 70, under the title—"The Comparative Rate of Decomposition in Drawn and Undrawn Market Poultry." The fowls were all well bled, dry picked, and air cooled. Part were drawn; part remained undrawn. All were chilled immediately after dressing and shipped in iced cars over a haul of 1700 miles, the journey taking on the average seven and one-half days. On arrival the now frozen fowls were examined for acidity of the fat and for increase of bacteria in the body wall but all were found to be in perfect condition. From the wholesaler's chill room, they were sent in boxes by wagon to the retailer who kept them in his ice box or hung them in his show window. Here the difference between the lots began to show. After five days the stock in the hands of the retailer was all edible, three days having been necessary to thaw them, but two days later what was left of the drawn poultry was in "bad order," while the undrawn was still good. From that time deterioration was rapid in both. The result stated is: "Undrawn poultry decomposes more slowly than does poultry which has been either wholly or partially eviscerated."

There might also be an advantage in not having the head and legs removed, as their condition usually indicates the condition of the fowl before being killed.

The practical market man or huckster will tell you that he will bring his poultry drawn only to those who have ordered it. If he must keep it exposed for sale it must be undrawn, that there may be no access to the interior of the fowl for flies, hot air, or any form of contamination.

But the bird with full crop should always be rejected, and a constant demand be made that for twenty-four hours before killing no food, only water, be given.

EXTENSION COURSES IN DRESSMAKING

According to *The Country Gentleman*, a great work is being done in Minnesota by Mrs. Harry G. Krum who is helping to bring to the women in their homes the assistance obtained by others in the Home Economics Departments of the Universities.

Mrs. Krum began at the bottom. The first thing she did was to bring a sewing set with her and to discuss informally with the women the homely

task of sewing on buttons and making buttonholes. The next thing the county home agent did was to introduce the dress form. She explained that with its silent aid the housewife could make her own clothes and still have well-fitting, stylish garments.

"The men save money on their field seeds by combining their orders. Why couldn't we follow the same plan with the dress forms?" she suggested.

The women assented readily, and the next day Mrs. Krum visited a large department store in St. Paul and received an offer that made a form cost just half of what it would have cost if bought singly. She reported back to the women and closed orders for five forms.

Mrs. Krum believes that as a household necessity a properly padded dress form comes next to a good sewing machine. It adds much to the pleasure of doing one's own sewing, saving much time and energy and eliminating all worry and uncertainty regarding the final fit of the garment. There is no reason why, with its use, every housewife may not have sensible, stylish clothing.

As the housewives became expert in the use of the dress forms they developed an astounding desire for information regarding the purchase of materials, cutting of garments, selection of up-to-date styles, and the many other details known to the dressmaker. To meet this new demand Mrs. Krum devised an unusual demonstration outfit. She carried with her fashion magazines and stylebooks, sewing implements, and dresses in all stages of making—everything packed in an ordinary suit case.

The most important garment in her sample bag was a simple one-piece dress with a reversible front, fastening without any buttons or buttonholes, neat and of simple but pleasing design. This dress was made on an original pattern worked out by Mrs. Krum herself. It has proved very popular, and last fall it was incorporated in the stylebook of a large pattern firm.

"Everyday clothing, because it is worn the most, should be attractive, yet simple," declares Mrs. Krum, "and it should be easy to care for as well as inexpensive. The one-piece garments for women and children require little material, are quickly made and, if tasteful designs and becoming materials are used, make attractive dresses."

Among the other samples that she carried with her were two aprons, each covering the entire dress, with caps to match; waist with skirt unattached, to show method of adjusting the skirt; one-piece underwear for children; maternity gown, designed for ease and comfort; and a baby's complete outfit in one-piece clothing.

In her own county Mrs. Krum loses no opportunity to press home her slogan, *Sensible, Yet Stylish Clothing*, and in this way she is doing much to acquaint the women with the latest styles. She has made arrangements

whereby many of the fashion, women's and agricultural magazines will be taken by the clubs. One of the pattern companies has offered to make a special rate on patterns to the clubs.

"With the right sewing equipment, proper patterns and the requisite knowledge of suitable materials," said Mrs. Krum, "the woman on the farm home can be well dressed with the same expenditure that would otherwise be made for slovenly, formless clothes."

"The lessons in the value of *coöperative buying* which the women are learning through the collective buying of dress forms and other articles are going to be of vast importance," continued the county home agent. "I feel that the encouragement of this spirit of coöperation will be one of the greatest benefits to come from the work that we are doing in Ramsey County. It is in the exchange of ideas that we profit. It is not so much that I bring information to the women of the clubs as that I act as a clearing house for ideas."

TYPHOID CARRIERS

Now that the quality of public water supplies has been greatly improved and the practice of milk pasteurization has been widely introduced, outbreaks of typhoid attributed to typhoid carriers are becoming more conspicuous than formerly, although probably they are not really more frequent. A remarkable epidemic due to food infected by a carrier was recently reported by Sawyer in a recent issue of *The Journal of the American Medical Association*, and while this was perhaps exceptional in the number of persons infected at one time, it emphasizes the grave danger of allowing carriers to have to do with the preparation or handling of food intended for general consumption. The still more recent typhoid outbreak at Lehigh University with more than fifty cases and several deaths has been traced likewise by the Pennsylvania State Department of Health to a kitchen employe who proved to be a carrier. Such instances—and they are multiplying fast—suggest that wherever feasible, employes handling foods liable to spread infection should be examined for possible typhoid reaction in the blood. In case the reaction is positive, and even when it is negative but there is a definite history of typhoid fever, bacterial examination for typhoid germs should be made.

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BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS if the Journal price is listed.

The Practical Garden Book. By C. E. HUNN AND LIBERTY HYDE BAILEY. New York: The Macmillan Company, pp. 250. \$0.50. By mail of the Journal, \$0.55.

The simplest directions for the caring of the commonest things about the house and garden are given in this book. It has been prepared by C. E. Hunn, an expert gardener, and by L. H. Bailey, an experienced editor of many books on horticulture. The book is made up on the plan of alphabetical arrangement in which each plant, whether herb, shrub, or vine, is described in simple, straightforward language and where all the essentials in connection with each plant are discussed in the briefest possible manner.

To people who want specific information on particular kinds of plants this book will prove to be a valuable reference; to the person who is looking for the principles of horticulture or plant management, it will prove a disappointment. The Practical Garden Book is one for amateurs and not for experts.

A Study of Chicago's Stockyards Community.—III, Wages and family budgets in the Chicago stockyards district. By J. C. KENNEDY ET AL. Chicago: Univ. Chicago, 1914, pp. 80.

This study was carried on under the direction of the Board of the University of Chicago Settlement, the results being considered in connection with wage statistics from other industries employing skilled labor. Many nationalities were represented but out of the 184 families 88 were Polish and 68 were Lithuanian. The following quotations are from the summary.

"One hundred and thirty-one families rented their quarters. The average rental per family was \$107.83, or 13.2 per cent of the total expenditure. One hundred of the 131 renting families occupied flats of four rooms.

"The 68 Lithuanian families had on an average 4.12 lodgers per family. In one case 13 people were crowded together in four small basement rooms.

"The average expenditure for foodstuffs and liquors was \$441.83 per family, or 53.62 per cent of the total expenditure, [the amount expended for alcoholic liquors being 4.42 per cent of the total expenditure in 180 families using it].

"The minimum amount necessary to support a family of five efficiently in the stockyards district is \$800 per year, or \$15.40 per week."

Foods and Household Management. By HELEN KINNE AND ANNA M. COOLEY. New York: The Macmillan Company, 1914, pp. 401. \$1.10. By mail of the Journal, \$1.22.

The large subject of foods and home management has been most admirably dealt with by the authors in this book. The chapters on food present the material in a systematic manner, and while definite lessons are not given, the sequences are natural and the subject is treated in such a way that there is ample opportunity for the study of foods to be developed in any way which will best fit the needs of the students. The nutritive value of the different foods is an important part of the chapters dealing with foodstuffs and is well applied in the chapter on Menus and Dietaries, (which was contributed by Professor Rose of Teachers College).

The chapters on the Budget, and System in Household Management are unusually clear and definite. A brief space is also given to Housewifery, Laundering and Dry Cleaning.

Altogether the book is in every way a suitable companion to *Shelter and Clothing* previously written by the same authors.

The teacher of Home Economics in the grades will find it a valuable reference book for herself; the high school teacher a most excellent text book for her classes in cooking and home management, and the college teacher will frequently find it advisable to use it as a text or reference for special classes. Moreover, last, but by no means least, the *homemaker* will find in this book unusually clear and concise information on all subjects pertaining to foods and the management of her household.

The authors are to be congratulated on getting out two such useful books.

Foods and Sanitation: a text-book and laboratory manual for high schools.

By EDITH HALL FORSTER AND MILDRED WEIGLEY. Chicago and New York: Row, Peterson and Company, 1914, pp. 396. \$1.25. By mail of the Journal, \$1.40.

It is one of the avowed aims of these authors to develop scientific principles underlying food work as a point of departure in teaching recipes, manipulation, dietetics, sanitation, etc. Certainly they have succeeded admirably in carrying out this intention, and have in addition, supplied much good material on food production and manufacture, practical housewifery, and sanitation. For not only have they devoted about 80 pages of the text explicitly to sanitation (theories of disease, habits which will help avoid disease, dissemination and prophylaxis for a dozen or two common infections, house site, indoor air, house heating, lighting, plumbing, sewage and garbage disposal, fire prevention in the home, water supply, clean food, dust prevention, disinfectants), but they have also included much important material in sanitation in their discussions of food production, for ex-

ample, in the chapters on milk and meat. All of their work gives evidence of familiarity with recent progress in the sciences of bacteriology and physiology, as well as in other science; and is marked by great carefulness and a high degree of accuracy. The subject of ventilation, is treated from the modern standpoint, in a text for school children. In fact, we know of no other high school text in Home Economics in which the subject of sanitation is presented to any great extent, successfully and in thoroughly up-to-date fashion.

The book has been successfully tried out with high school students who have had no previous science training and no special training of any kind to fit them for the course; yet many teachers will doubtless prefer to use it with classes which have had some work in chemistry, or physics, or both; or with first-year normal or college classes. Wherever it may ultimately find its largest field of usefulness, however, it must invariably prove a source of inspiring suggestion to teacher and to student.

Modern Cities. By HORATIO M. POLLOCK AND WILLIAM S. MORGAN, PH.D. New York: Funk and Wagnalls Company, 1913, pp. 418. Illustrated. \$1.50. By mail of the Journal, \$1.62.

The authors' purpose has been "to give students and others interested in social progress and civic betterment a comprehensive view of the best modern features and ideals of municipal life without burdening the pages with details." The book is the fruit of a pilgrimage made during the summer of 1910, by two men familiar with American municipal problems, to a large number of European cities most of which had been visited before and could therefore be studied in the light of recent progress. There are chapters on town planning; house planning; conservation of human life; the value of parks; developments in education; the social evil and many other topics which are occupying the attention of persons interested in municipal progress. No subject is treated exhaustively but all are presented fearlessly, readably and suggestively.

The Farm Kitchen as a Workshop. By ANNA BARROWS, U. S. Dept. Agr., Farmers' Bul. 607, 1914, pp. 20, figs. 6.

Such subjects are discussed in this bulletin as the relation of the kitchen to other parts of the house; the size of the kitchen; the finishing of floors, walls, and ceiling; lighting, ventilating, and heating; porches and screening; permanent equipment of the kitchen; and the kitchen as laundry. Particular attention is given to the arrangement of the kitchen stove, cooking table, and other kitchen equipment, so that the journeys more frequently made in doing the kitchen work are short. The importance of adequate equipment is pointed out and suggestions made for labor-saving equipment and expedients.

Woman's Congress [and Exhibits of Interest to Housekeepers]. Mich. Farmers' Insts., Inst Bul. 19, 1913, pp. 225-275, 277-280, 284-287, figs. 19.

Among the papers presented were the following: Planting the Home Grounds, by C. P. Halligan; How Can We Solve the Problems of the Farm Home, by Ilena M. Bailey; A Discussion on How to Solve the Problems in the Farm Home, by Mrs. F. D. Saunders; The Roasting of Meats, by Agnes Hunt; Using Sale Patterns, by Ora G. Yenawine; and Coöperation among Woman, by Jennie Buell (including data on coöperative laundries).

Domestic science bacteriology formed a part of the bacteriological exhibit, and H. H. Musselman had arranged a household power plant exhibit. Both of these are described in considerable detail.

Mechanics of the Sewing Machine. Monograph Five, Joint Committee Series, National Education Association Edition. Published by Singer Sewing Machine Company, New York, pp. 80. Illustrated.

This monograph will interest teachers of applied physics and every teacher of sewing who uses the sewing machine. Copies may be had free from J. A. Randall, Pratt Institute, Brooklyn, N. Y. Dr. David Snedden, speaking of this bulletin, says, "The novelty of such a study is still sufficient to occasion the student of education a keen thrill of satisfaction."

The Etiology of Pellagra. By J. GOLDBERGER, *Pub. Health Rpts. [U. S.]*, 29 (1914), No. 26, pp. 1683-1686.

The epidemiological observation that nurses and attendants in institutions where there are numerous cases of the disease are themselves exempt from it may be explained, in the opinion of the author, by the difference in diet. It is here pointed out that the disease is distinctly rural and generally associated with poverty. It has previously been shown by studies of institutional dietaries and dietaries of rural regions that cereals make up a much greater portion of the dietaries of the poorer classes than of the more well-to-do. While the author does not believe that the consumption of corn or corn products is necessary for the development of pellagra, he believes that the presence of cereals and vegetables in too great a proportion in the diet is objectionable. In conclusion, he urges on account of the uncertainty as to the true cause of the disease a "reduction in cereals, vegetables, and canned foods that enter to so large an extent into the dietary of many of the people in the South and an increase in the fresh animal food component, such as fresh meats, eggs, and milk."

NEWS FROM THE FIELD

Conference of Charities to Discuss Educational Topics. Announcement has been made from the headquarters' office of the National Conference of Charities and Correction of the preliminary program for its forty-second annual meeting at Baltimore, Maryland, May 12th to 19th. The conference will meet under the presidency of Mrs. John M. Glenn, of New York, the second woman president it has ever had.

The program contains the names of over fifty leading charity workers and penologists, and it is anticipated that the unprecedented social situation of the present year will result in a conference of unique values. The program on "The Family and the Community" will result in considerable discussion of methods of treating individual cases of poverty, as, for example, in a study of the "Psychology of Cooperation." Prof. Henry R. Seager of Columbia University will give an address on the "Causes and Remedies of Unemployment."

A series of unique discussions from an educational standpoint is being arranged under the committee on education for social work, under the chairmanship and vice-chairmanship, respectively, of Porter R. Lee of the New York School of Philanthropy, and Miss Edith Abbott of the Chicago School of Civics and Philanthropy. There has been an enormous increase in recent years in the number of people engaged professionally and on a volunteer basis in the solution of practical social problems, and this committee is attempting to determine the standards of this young profession and to give it a logical and proper adjustment to the other longer established professions. The discussion will include a treatment of the curriculum for training social workers and the relation of social theory to practical situations.

The program on "Children" will include a study of comprehensive community plans in work for children and practical results of children's agencies in respect to rehabilitation. It is the expectation of the chairman of this section, Mr. C. C. Carstens of Boston, to make as clear a statement as possible of the relations of social agencies in treatment of children to other agencies for constructive and preventive work.

Other divisions of the program relate to the following subjects: corrections, health, public and private charities, social hygiene, social legislation, and state care of the insane, feeble-minded and epileptic. Among the speakers are: Prof. Edward T. Devine of Columbia University, Dr. Wil-

liam H. Welch and Dr. Adolf Meyer of Johns Hopkins University, Dr. Charles P. Emerson of Indiana University, Dr. H. H. Goddard of the Training School for the Feeble-minded at Vineland, N. J., and Dr. C. B. Davenport of the Eugenics Laboratory, Cold Spring Harbor, N. Y.

Extension Work. The Department of Home Economics at Cornell University made the following report concerning the extension work for the year ending October, 1914: meetings attended, 173; addresses given, 314; extension letters written, 2,671; extension schools held, 34; demonstrations given, 195; readers enrolled, 37,732; clubs enrolled, 93.

The Homemakers' Conference in connection with Farmers' Week was held at Cornell University February 8-13. The lectures were given by professors at the University and well known Home Economics lecturers from elsewhere.

The women who attended were instructed in cooking, sewing, laundering, canning, household accounting and home furnishing. Besides this definite instruction there were lectures and discussion on many subjects relating to the home such as: Women as Workers in Industries, Human Rights, Social Hygiene, Force of Heredity, Training for Girls, and Responsibility of Parents.

Nebraska Home Economics Association. The tenth annual meeting of the Nebraska Home Economics Association was held at the State University Farm, Lincoln, Nebraska from January 19 to 21 inclusive.

The forenoons were devoted to the study of foods. Prof. Alice M. Loomis, Head of the Department of Home Economics, gave three lectures on Food for the Family in which she considered composition and preparation of foods and their combinations in meals. The Misses Rokahr and Scott of the Extension Department had charge of the laboratory work, which consisted of the preparation and service of typical examples of the important classes of foods. The problem taken up on the third day was the preparation and service of a three course luncheon prepared from left overs. Dinner for thirty was served in the practice dining-room in Home Economics Hall.

The afternoon meetings were held in Agricultural Hall. The first afternoon was given over to the work of women in Clubs. Mrs. Emma Reed Davisson, president of the Association gave an address of welcome. Mrs. Harry L. Keefe, Walthill, spoke on the National Federation; Mrs. A. G. Peterson, Aurora, on the State Federation; Mrs. Elizabeth M. Campbell, Bethany, on The City Club; and Mrs. Lulu Kortz Hudson, Simeon, on the Rural Club.

The second afternoon was devoted to Art in the Home. Miss Sara S. Hayden of the Department of Fine Arts gave a paper on Art in the Home. Mrs. Jas. T. Lees of Lincoln spoke on Nebraska Artists. The assembly room had been decorated with pictures from Nebraska artists. Some of our Nebraska Birds (illustrated) was the subject of the talk given by Mrs. A. E. Sheldon of Lincoln.

The Home on a Business Basis was the subject for consideration on the third afternoon. The following program was given: The Budget System, Mrs. Geo. A. Loveland, of Lincoln; Kitchen Equipment, Miss Mabel C. Daniels of the Extension Department; How the Little Folks and I did the Work, Mrs. W. G. Whitmore, of Valley; Economics of Dress, Miss Helen Lee Davis of the Home Economics Department; and House Practice as a High School Study, Miss Maud Mathes Wilson of the Home Economics Department.

Home Economics Association of Washington, D. C. The February meeting was held on Thursday the fourth. Miss Barrows was the speaker of the afternoon. She first referred to the beginning of the Home Economics Movement and the individual efforts of Mrs. Richards and Mrs. Lincoln as essential factors in that beginning.

She spoke of the Lake Placid meetings as among the first steps of united effort. Later came the organizing of the American Association in 1909, under the leadership of Mrs. Richards, and although that organization has progressed so splendidly it needs, or should have, still more hearty support.

Continuing her address she spoke of the application and value of Home Economics, and the results to be obtained by applying the quotation of "Freeing the home from the dominance of things."

In the study of Home Economics the selection, preparation and cooking of food seem to have first place, and the underlying facts are cleanliness, wholesomeness and understanding.

She advised the selection of kitchen appliances and utensils which may be used for more than one purpose, and those which may be kept clean most easily. Emphasis was also laid on the need of reducing the number of utensils used, as a means of saving time and strength. This means the preparation of fewer dishes, or simplified menus.

Intelligent selection of foods has a direct influence on the high cost of living. The value of bread and milk, or composite dishes with a bread and milk foundation, was discussed as one practical solution of the problem.

In closing Miss Barrows spoke of the necessity of business management in the home.

The Texas Home Economics Association. The second annual meeting was held on November 26, 1914, in San Antonio, in connection with the Texas State Teachers' Association.

The morning session was devoted to the art phase of our work. Miss Elsie Jonas, teacher of Domestic Arts in the San Antonio High School led the discussions and read a paper on The Educational Value of Domestic Art.

The principal speaker of the afternoon was Miss Mary E. Gearing, Director of the Department of Domestic Economy in the University of Texas. In her talk on teaching Home Economics in Texas, Miss Gearing especially emphasized the fact that we must utilize Texas foodstuffs to build up our home industries and also that we must create a demand for more diversified foodstuffs to be grown in Texas.

George Peabody College for Teachers, Nashville, Tennessee. George Peabody College for Teachers has just received the gift of thirteen scholarships for the session of 1915-16 from Montgomery Ward and Company, of Chicago. This well known firm offers one scholarship of \$150 in the Seaman A. Knapp School of Country Life for each of the following states: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

These scholarships will be awarded by the college authorities in coöperation with the State Superintendent of Education, to young men and women who have given evidence of ability as teachers, superintendents, or community workers in rural districts.

In offering this generous gift, Mr. Charles H. Thorne, the president of the company, makes the following cordial statement of approval to the administration of George Peabody College for Teachers:

The scholarships for which we are to be sponsor, convey better than any other way we can think of, our appreciation of what you and your work mean to the South. It seems to us that a program as wide in scope and as comprehensive in its aims as that which you have set yourselves to accomplish, is worthy of the most sincere praise. Where men and women have set their minds to a task so vitally important, the undertaking calls for encouragement and support, and it affords us genuine pleasure to further your work in a substantial, concrete way. Knowing something of the necessity of an intelligent and broad working out of the pressing social and economic problems of the South only serves to enhance in our mind, the value of your efforts as men and women and as an institution.

THE
Journal of Home Economics

For those interested in Homemaking, Institution Management,
and Educational Work in Home Economics

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AMERICAN HOME ECONOMICS ASSOCIATION

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A Canning Club Girl on her Tenth Acre Plot



A County Agent Holding a Demonstration at the Home of a Club Member

THE Journal of Home Economics

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EXTENSION TEACHING IN LOUISIANA¹

ELIZABETH KELLEY

University of Wisconsin. Formerly, University of Louisiana

To understand the work that we have tried to do in the South it will be necessary to know something of Louisiana and Louisiana conditions. Farms for generations have raised the same crop year after year. In the northern part of the state it was cotton and in the southern part it was sugar. All the large plantations have had plantation stores at which all the small planters traded. Practically everything for the maintenance of the stock and the family of the planter was imported.

A few years ago when the boll weevil destroyed the cotton crops the Dean of our Agricultural College, Professor Dodson, sent his men through the state to talk diversification. But it was a hard thing to convince the farmer that the days of large returns from cotton were over. At a farmers' meeting at which Professor Dodson talked diversification, one splendid looking old gentleman said, "I shall never diversify. My grandfather planted cotton, my father planted cotton and I have planted cotton for forty years, and I intend to go right on planting cotton." He was asked if he had not lost the last four crops of cotton and he answered, "Yes, but I am going to put my last dollar into cotton this year." In the southern part of the state where the crop was sugar we met practically the same opposition to diversification.

¹ Presented at the Seventh Annual Meeting of the American Home Economics Association, Cleveland, 1914.

With this attitude of the older people toward the methods of agriculture we found that our hope lay in the children, and so we formed them into clubs. The working of all these clubs is practically the same. The corn club is well known. Louisiana was the first state in the Union to form pig clubs and the work of the pig clubs under the splendid management of Mr. Wm. H. Balis has had marvelous success. New Orleans, which five years ago imported 95 per cent of its pork, today imports less than 20 per cent.

I remember attending one of the parish fairs in the northern part of the state and a little club boy drove his pig to the fair to exhibit it. The men in that community were accustomed to making pens to fit the pigs of the community and when this lad drove up his pig it was so large that they were obliged to put it in corner-wise. When I saw the lad in the morning he was standing by the pen, a typical, underfed, neglected little farm lad. His hat was dragged down over his ears and he wore a coat that he had inherited from an older brother two degrees removed. While he stood there several men came up and asked "Why, whose pig is this?" "Well how did you feed it to get it to look like this?" etc. At first the boy was diffident in answering the questions, but as one question after another was fired at him he began to stand more erect and answer promptly. When I came back in the afternoon I would not have known it was the same boy that I had seen in the morning. His head was high, his shoulders tossed back and his eyes were fairly sparkling. Even his coat seemed to fit him. The boy had about him the look that comes from success. He had done more than any boy in that community or even any man in the community, and it had left its stamp upon him. I could not help but think, as I looked at the child and looked at the pig, "If I could only get my mothers to feed their children as scientifically as this lad has fed his pig, what a splendid race of people we would have in Louisiana," and in my girls' club work the first aim that I put before my girls is to so attend to their gardens and can their products that they will be able to give the family an adequate and varied ration the year round. The second aim is to teach the girls the dignity of work well done, to make the girls feel their own economic worth in the world. The third aim is to give the girl a reward for her efforts, money with which to buy the things that go to make life worth living. This last is accomplished by assisting the girl to get markets for her surplus produce.

The girls' club consists usually of not more than ten girls and each pledges herself to raise one-tenth of an acre of tomatoes and other vegetables, to keep a record of her operations and send it to us at the end of the year, to sell the surplus products while they are fresh, to can the rest and, when the supply for the family is laid aside, to sell the surplus mainly in her own community.

We are encouraging girls along the lines of their own development. For this we offer the twenty to thirty girls who make the highest records in the state a short course of two weeks at the university in which we try to give them lessons in those things that are of paramount importance on the farms.

Besides this club work we have conducted short courses among the children of the state. The children of one parish are invited to come to a town where there is a good school and where the people of the town will entertain them for a week. Then the heads of departments of the university go there and conduct a regular school for these children. We have sometimes had as many as two hundred boys and girls attending these courses. Aside from giving them the practical instruction that will make them better farmers and farmers' wives, we try to add something that will bring beauty and culture into their lives. We have talks on pictures and on books and music and I carry with me a victrola. At the end of a long hard day when we are all worn out we sit and listen to the strains of some grand opera or a simple folk song and when a waltz or two-step is played, old and young dance to the strains.

Another form of extension work is done by the teachers of Home Economics in the state. We have endeavored to get the teachers, sixty-five and over, to work with the mothers in the communities in which they are located. The course of study that we have written out for these schools has been made along the lines of cooking and sewing to be done in rural communities. Our emphasis has been placed on making the best out of the materials at hand and encouraging the boys and girls to have a home garden. Every domestic science class was obliged to have a school garden and this was cultivated by the girls of the Home Economics departments, each class giving one period a week. The fruits and vegetables of this garden were used in the work in the schools and the surplus was canned, to be used during the winter months.

Another feature of the course of study is that pertaining to the care of children. In every school a model outfit for a baby was made, consisting of a basket and little mattress and bedding and the proper clothing for an infant. Lessons were given on the care of the infant. In many cases a doll was used, bought by the money earned by the girls.

This extension course of study was made especially to fit conditions in Louisiana, and required three years of study and planning before even a tentative course was made, but we have something now which fits. This is the most satisfying work I have ever done, and if you are looking for large returns of enthusiasm and pleasure in your work come to Louisiana.

HOME INDUSTRY FOR THE COUNTRY GIRL¹

JANE Z. MCKIMMON

Farmers' Coöperative Demonstration Work, North Carolina

We do not often think of the country girl as being in the business world, but in North Carolina canning clubs have been organized in order to give an industry to our country girls, and they are making good. We ask the girls if they do not want to come together in clubs, grow a tenth of an acre in tomatoes or string beans and learn to can them so that they may be used in the home or put upon the market.

In writing about their work, many of the girls say: "I joined the canning club to make some money for myself, and I do not think it is an unworthy ambition." We had two little girls, each of whom cleared \$107 on a tenth of an acre, but they did not have one cent of that \$107 to spend and so we made out a blank requiring the girl to do certain things before she was enrolled, and at the end was printed: "The father is asked to sign this blank saying that the girl shall have everything that she clears in this canning work." The oldest of these two little sisters had written to me: "I cannot be your little tomato girl any more; Pap says he won't sign that paper because he needs the money to run the farm." I wrote to him: "I do not believe that you understand what we are trying to do with this club work. We are not making money for you to spend; we are giving

¹ Presented at the Seventh Annual Meeting of the American Home Economics Association, Cleveland, 1914.

the girl some means for earning and spending for herself. We want to train her to spend money and the only way is to give her the money to spend; let her make her own mistakes and she will profit by them. Now, I believe you are just the kind of a man who is going to do the best thing for your daughter. If every father should say he would not let his girl spend the money, we would go right out of the business because we are not making money for you but for the girl." I had a letter from the little girl: "Pap signed the paper. Your glad-at-heart little Tomato Club Girl."

We promised these girls to assist them to a market. At the end of the year 70,000 quart cans of tomatoes were dumped on us in October and every little girl wrote to please sell them right away for she wanted her money. But we said to our girls: "If you cannot sell in your own county we cannot ask outsiders to buy. Get busy and get a market in your own county; cut open your cans and let the people see the contents and perhaps you will get a market." One little girl at Jamestown walked into a store, cut a can open, and said: "Mister, I want to sell my tomatoes to you." He said, "Oh I have plenty." But, she said: "I want to go to school." He looked at the can and saw that it was full and contained red, ripe tomatoes, and he paid that girl \$40 for 400 cans. When the neighborhood began to use the cans there was no sale for the commercial product, and so the merchant told her he would give her an order for everything she could produce the next year. One girl produced 1000 cans of uniform measure and quality.

We have found out that, if we are going to sell, standardization is the very cornerstone of our business. If we can say that we have a certain standard we have no trouble in getting a market. The Pure Food Commission told me that I must either do business as a corporation or an individual. As a corporation I would not have a hold on each individual girl. If I let the girl do business as an individual I must know what she was doing, and this is possible if every girl puts her name and address on her can label. I require every girl to write her name and the date when the can is put up. I am asking every agent in the county to stamp the weight on the can at some time during the summer. She must stamp on a number 3 can that it weighs not less than 38 ounces, and on a number 2 can, 26 or 28 ounces. The women in charge of this work took it for little or no money; the first year \$150, and that meant work all the year

around. They worked for two months continuously when they were canning, and they also taught the girls how to plant and prune, how to spray, how to stake, and yet received but two months' pay.

We have our girls divided into classes. An agent has 30 girls in three clubs and she reaches the clubs 3 days a week. She sets up the canning apparatus in a school house. She apportions the work so that there is one girl to look after the fire and the cooking, two to do the peeling, two the packing, two the capping, and so on; and of course, these are changed about so that a girl learns every process. We do not allow her to can at home until she knows how to do these things well. We are encouraging each girl to buy a canner for herself provided she has been in the work a year or two. We have a great many of them canning at home, but the county supervisor visits the homes sometime during the season, and is at liberty to cut open a can and test it at any time. If it is not a sufficiently good grade, our label does not go on the can. You will realize that we cannot see every can put up by 1500 girls but we are trying to make the girl feel the responsibility of what she puts in, and we are trying to build up organizations in the county. If the county has been organized for three years, there is an agent in that county, and she has sub-agents. She demands standard from these sub-agents, and I demand standard from her.

They produce only two crops in the tenth of an acre—string beans and tomatoes. We want them to do one thing well. We will not sell anything but string beans and tomatoes for a first year girl; peaches, berries and fruits for a second year girl; and we are teaching the third year girl to pack jams and jellies. We have to have very strong supervision for all of this, and we tell the girl that her standard depends on the weight of a can, the flavor of the product, her cleanly methods, and how neat and clean the label is. When Mrs. Heath, the President of the Housewives' League, came to Raleigh last year we had one team give a demonstration and afterward Mrs. Heath said: "If that is the cleanly method you use I can recommend you to all of my housewives all over the United States," and that meant a great deal to us. Last winter when I took an exhibit into New York State at the solicitation of these housewives they gave our girls \$500 worth of orders of fancy stuff, and I am filling that order in the following way. I am saying to each of 31 girls who know how to sterilize: "Here is an order for \$16. It is your responsibility; if

you fill this so that it is acceptable to the person who has ordered it, she is probably your customer for life." They realize that it is their responsibility. Then of course we ask the county agent to supervise those girls. We grade in the commercial world as *extra standard*. There is but one higher and that is A1, and we can never reach that.

We want the girl to market at home, and so we put a little advertisement in the home papers in the county. "A case of tomatoes, 24 cans, delivered at your door, for \$2.40." And we have had many responses to these little advertisements. The housewives of the towns will send in to the agent and ask her to send out 2 dozen cans, and she tries to get enough orders to make it pay to take them into the town. We sometimes hang an advertisement on the gate post so that the hungry automobilist passing by may see what we have for sale.

This work is big with possibilities, and every woman in the United States can help the girls and the canning in this way. If you will realize that they are inexperienced girls, and that it is going to take some time to fix their standards you will see that it is kindness to us, if you get their products, to let us know when they are not good; it is one way in which you can help us, and I believe it is the best way. .

THE VISITING TEACHER IN THE FARM HOME¹

MILDRED M. VEITCH

Agricultural College, North Dakota

It is almost three years ago that a group of men prominent in the business and commercial affairs of the state launched the Better Farming Association of North Dakota. The purpose of the organization was to bring about better ideals and methods of agriculture. North Dakota is one of the most thoroughly agricultural states in the Union, but like many an older state, it has been passing through the period of a one crop agriculture which so exhausts and impoverishes the land.

The method of carrying on the work of the association was by the means of field agents located in the various counties which had

¹ Written for the Seventh Annual Meeting of the American Home Economics Association, Cleveland, 1914.

made application for an agent. By living in the community, he is enabled to know the people as neighbors, their ideals and the conditions with which they are struggling. The work as organized was carried on only to make the farm more productive and to give greater financial returns.

It was Thomas Cooper, Director of the Association, who realized that the ultimate ideal of so much of the agitation for better rural conditions is lost sight of, because the farmer and his interests which are concerned only with money returns, have been the center of attention, and the home, which is the real end, has received only secondary, if any attention. The Better Farming Section of the State Experiment Station is now employing a field woman to go into the individual homes.

The average farm woman has to work much harder, under more trying conditions, and with poorer tools than does the average suburban or city woman. Let us consider the four principal reasons why this is a fact. First and most important, the wrong conception of an investment. The money spent for a water system, which is used every day during the year and which costs about \$500, has not been regarded as an investment, but a traction engine, to be used in actual labor about thirty days during the year and costing \$1500, is an investment because it realizes a cold cash income. A happy, contented, satisfied wife who has time to keep in touch with what is going on about her and a family of boys and girls who love the farm because it offers more than any town can possibly offer, has been entirely disregarded in the attempt of the farmer to possess a large bank account.

Second, the old opinion, that whatever went into the house which was not *absolutely* necessary was a luxury, and was to be paid for by the farm woman out of the butter and egg money. But although she sells the butter which she makes herself and the eggs from the chickens she has taken care of, yet by the time Johnnie's new suit and father's shirts, and the sugar and raisins are purchased, there is little left for the good woman to squander on a new-fangled arrangement to mix bread in and thereby save her strength and energy.

The farmer differs from the business man in town because he must maintain a commissary department and a lodging house. In town the boarding houses take care of the help and even the family but these have never found their way into the country.

There is a third great reason often given for meagre equipment in the country home, namely, that the home is not permanent. Often-times farmers have said to me, "Oh well, what's the use of putting five hundred dollars into a water system, when we don't intend to stay here always. It will be left for some renter who won't take care of and appreciate it." This is the ideal of a great many, in fact, I might almost say of the average farmer, to work hard and hoard up a lot of money and as soon as possible go to some town or city to retire. This retired farmer, you will find when he does go to town maintains his same old ideals of getting along without this or that convenience, with this excuse, "Oh well, I've lived all these years without a sink in the kitchen, and guess I don't need one now." Thus the farmer who lives in the idea of one day retiring, has yet to discover that living each day is the secret of life.

Commercial interests have done much for the woman in town which they have not done for the woman on the farm. The average house in the town or city has a heating plant, hot and cold water, gas for cooking, electricity for lighting, all taken care of by commercial interests or the municipality. Then too, the house-planning for towns has been pretty thoroughly worked out, but is sadly neglected for the farm. If a farmer wants to build an expensive and convenient house, probably he will erect some very fine house suitable to the town, but unsuited to his needs; or if on the other hand it is an inexpensive house, it will be merely a kitchen and dining room, parlor and bedroom, put together to suit the whims and fancies of some carpenter.

At present, there is a great agitation about social centers and recreation for the farm woman. But what good would be a modern and beautiful club house within walking distance of every farm home if the woman was so tired and worn out at the end of the day that she could not enjoy it, and was obliged to go to bed as soon as the day's work was over in order to be ready for the next day's round of monotonous labor. No, the average farming community is thoroughly capable of taking care of its own amusement, and we would have as much right to be dictatorial in regard to the way that its leisure time should be spent as to dictate the color of the roses in their parlor carpet.

This does not mean that there is no recreation problem in the country, but it is due to the lack of time to take leisure and plan for

it rather than the inability of the country man and woman to plan their own pleasure.

Often the aesthetic and cultural ideas of the farm women are criticised, but again it is a matter of being too busy in getting meals for hired hands and doing the family mending to be greatly concerned over a too vividly colored picture on the walls of the sitting room.

Thus it was with this ultimate ideal in mind that we felt that the first thing was to obtain more efficient tools and working conditions, which means more time and contentment, and this resulted in our focusing our attention upon, (1) efficient arrangement of working equipment and utensils in the kitchen with a view to saving time and energy; (2) encouragement and aid in purchasing the best labor saving devices suited to the particular needs of the individual; (3) better sanitation, including cisterns, water systems and methods of sewage disposal.

The first part of the eight months was spent in getting the situation and problem in hand and in becoming acquainted with communities in a friendly and neighborly way. It was during this time that a Country Woman's Club was organized by the farm women in the section tributary to one of the larger towns in the central part of the state. The object of their organization was the maintenance of a club room in this town which would be used as waiting and rest room when the farm women came to town to do their shopping. The project was planned out and financed entirely by the women of the surrounding country.

The winter is a difficult time to get about from farm to farm in doing actual field work. This gave a fine opportunity, however, to visit some of our farmers' clubs, of which there are about three hundred and eighty organized by the Field Agents of the Better Farming Section of the State Experiment Station. At the clubs the women discussed subjects pertaining to more efficient methods of doing housework and the matter of expending money in labor saving devices for the house which were regarded in the light of investments and putting them on the same plane as the farmer puts the newer types of machinery for his farm. The men were urged to do their part in this campaign for developing better farm homes.

Spring work over, work in and with the individual home has been taken up. In one place it might be a request to come and help design a cupboard to fit into a specific place in the wall, or it might

be that some one was contemplating putting in a water system but had no idea of the cost or how to go about it. Inquiries come into the office such as these, "Which is better, a wick or a wickless oil stove," or, "Which would you advise as the greatest labor saving device, as I can only afford to buy one, a bread mixer or an oil stove."

Realizing that quite often people cannot build a new kitchen or even put much money into fixing over the old inconvenient one, we have made it our special interest to rearrange a poorly planned kitchen. It was in this regard that one of the Field Agents sent word that a woman was planning to put in a water system but there seemed to be no possible place for the sink in the kitchen. Would we go out and see if there could not be something done? Of course, the plumber had suggested the most impossible place in the room for the sink, but by changing the position of the stove and putting the sink there, in its logical place, one kitchen was saved from being the most inconvenient one to be imagined.

We are quite often asked to suggest changes in plans for new houses to be built. Such an experience comes to my mind in this regard. A certain man was determined to build a square house, and he insisted that all the rooms down stairs must be of equal size, with the chimney in the center of the house. It was only by showing him a catalog of houses that we proved that the interior of square houses did not necessarily need to be entirely spoiled just to accommodate an ordinary brick chimney.

Among more efficient methods of doing housework, dishwashing is one of our hobbies. People never talk about drudgery in dishwashing if it is done properly. So out here in North Dakota we are making more efficient dish-washing one of our slogans, and within a short time we hope to be unable to find any right-handed woman draining her dishes to the right side, or with her dishpan on a table so low that more energy is lost in stooping over it than in washing the dishes.

Thus the work which has been attempted with the farm women of North Dakota has been mainly in regard to things which in the town and city are taken care of by commercial and educational interests. When the farm home has been placed on a more efficient basis and some of the conveniences found in the city homes have been placed in it, not a few of the problems which are today puzzling social workers will have been solved.

THE NEED OF THE VISITING HOUSEKEEPER IN RURAL DISTRICTS¹

MRS. HENRY M. DUNLAP

Savoy, Ill.

The term Visiting Housekeeper has a very significant meaning and purpose viewed from the farm woman's standpoint. We have in the state of Illinois thirteen county visiting farm advisers or experts. They are provided with an automobile and an office and go forth to instruct the farmers, individually or in numbers, in better methods along all farm activities. They seem to have made a success of it and the demand is increasing for these trained experts.

But there is no trained visiting housekeeper in our state. We have a few trained visiting nurses that are doing good work in the large cities. We need trained visiting housekeepers as much as, if not more than, we need trained visiting farm advisers. Why more? Because the housekeeper is dealing with human life and she makes or mars life according to the amount or lack of scientific and correct knowledge she possesses.

Why have we not the interest and progress in the visiting housekeeper that we have in the visiting farmer? The answer is—woman's lack of financial independence and her inability, through years of practiced self-denial, to expect and demand the proper help in solving the economic and living problems in the home.

There are many difficulties to be encountered in this visiting housekeeper's movement.

First, the difficulty of finding trained workers even if the financial support was secured. A successful worker must be equipped with not only science and theory but also with practice and tact above everything else. The level head with a broad sympathetic charity should be a predominant requirement in the training for a visiting housekeeper.

Second, the difficulty of overcoming woman's conservatism and sensitiveness in regard to her home and the methods she uses. There are but few homes, whether of high or low degree, that do not need expert advice if it can be given in the right spirit.

¹ Presented at the Seventh Annual Meeting of the American Home Economics Association, Cleveland, 1914.

A young woman whose house had just been remodeled was establishing herself in the new kitchen and dining room. She had not grasped the possibilities of the two rooms as to the arrangement of her working equipment to save steps. A friend asked, "Don't you want me to help you arrange and make convenient your kitchen and dining room?" She looked up with the most astonished and hurt expression and said: "No, thank you, I think I am capable of doing that for myself, and am glad to say that I am not such a crank on order and system as you are and so do not need any assistance." This was simply a case of lack of tact. It is difficult to secure successful workers in our Farmers' Institutes because they go with the feeling that they must impress their hearers with their superior knowledge, and not so much with the desire to give the knowledge they possess in such a way that it can be applied at once to the everyday affairs of life.

Just one instance of how criticism acted and has reacted many times upon me in my home. For a number of years I had been working in an old inconvenient kitchen, and laying the blame upon everyone but myself. It was my privilege to listen to a lecture on Home Economics wherein the speaker made this statement. "Nine times out of ten when a woman is working in an inconvenient kitchen it is her own fault. She has not put enough thought and effort upon it to have it different." I never entered my kitchen after that without thinking of it. The result was that the inconvenient kitchen was made into a convenient one and with very little expense.

Just this last winter I was giving an evening talk on Home Economics to men and women in a church of a small village. I spoke of how women were made to dislike housework because of our many architectural failures and lack of forethought as to the requirements of a kitchen and dining room to save steps. The next morning before I had finished my breakfast a little girl appeared with a note from her mother, asking me if I would come to her home before taking my train and see if I could make any suggestions in regard to her kitchen and dining room. I found that she was mistress of a new house which was a great burden to her with her five children and all her work to do; a burden because of an architect's failure and her own inability to know what she should have. Only with many changes and considerable expense could it be made convenient. If we had a woman in every state, or better still, one in every county

who could be consulted on such matters before such mistakes were made how much better it would be.

Again, the power for good that a visiting housekeeper could do in establishing a more simple hygienic form of living would be inestimable. Every child born and reared in the country should be healthy and efficient because its environment can be ideal if there is only a trained brain and hand at the helm.

As a director in our two-room country school for a number of years I recognized how little the education provided for our boys and girls was fitting them for real life. It never directed the girls toward the work of the home and a love for it, nor the boys toward the farm and all its wonderful opportunity, but left them to form the same habit of thinking and doing that their fathers and mothers possessed. And so in order to make some connection between the home and school a weekly card was planned to be distributed by the teacher, whereon all the work done by the boy and girl while at home was recorded. Our problem has not been in getting the teacher interested in the plan and willing to do the extra work, but it has been to get the mothers and fathers interested enough to assume the work of aiding their boys and girls in doing systematic work and recording it. If we could have in our county an expert visiting housekeeper as well as an expert visiting farmer, she could do almost as much good as our county superintendent of schools in helping to put the mother and father in touch with the work that the schools are trying to do for their boys and girls. There is no class of women that so much need the help and inspiration of a little club life as the farm women but they need the help of the visiting housekeeper to organize them and to establish working methods. She might also get the husband and wife to coöperate in the best equipment of a home in order that the work may be performed with the least expenditure of time and energy; get them interested in beautifying the home and its surroundings, by studying harmony of color within the home and the best planting of vine, shrub and tree for a beautiful inspiring outlook; get them interested in a good fruit and vegetable garden that will be of untold value to them. Unlimited possibilities present themselves to one who is hoping for the time when our visiting housekeepers will be as numerous as our ministers and school teachers.

SOME CONCLUSIONS REGARDING FOOD PRODUCTS

The recently published volume, *Food Products*,¹ by Prof. H. C. Sherman, is of particular interest to students of Home Economics since it brings together a large amount of valuable data on food in relation to diet and dietetics and so supplements the discussion of food and nutrition from the chemist's standpoint as presented in his earlier volume on *The Chemistry of Food and Nutrition*.

The author evidently has drawn upon the material which he has collected for class-room purposes but in addition to that which is more familiar has included much of the important data which have accumulated so rapidly during the past few years, and has rendered valuable service to the teacher and pupil who wish results of research interpreted for them. It has been the general plan in this volume to devote a chapter to each of the important types of food, taking into account production, preparation for the market, statistical and economic data, approximate composition, general food value, and sanitary inspection and standards of purity, as well as special characteristics of composition, digestibility, nutritive value and place in the diet. A basis for comparison is always needed. The study of milk, the author notes, "affords opportunity for the correlation of all these aspects and may therefore serve to set standards for the study of the other types of food."

Through the food, it is pointed out, "the body obtains the substances which enter into its structure, which yield energy for its activities, and which regulate the processes essential to life and health," which is essentially an amplified definition of food. In another place the matter is stated in another way, namely, that the functions of food are (1) to yield energy, (2) to build tissue, and (3) to regulate body processes. The author's statements regarding the functions of food are more detailed than those commonly found in the older texts. For instance, after speaking of the fact that the greater part of the total solids (both nitrogenous and non-nitrogenous constituents) is burned in the body to yield energy for the support of its activities, he makes the following statements:

Part of the protein of the food is used as a source of body protein, or, as it is often expressed, is used to build tissue. Several elements not con-

¹ *Food Products*. By H. C. Sherman. New York: The Macmillan Company, 1914, pp. ix + 594, figs. 36.

tained in most proteins are also essential to the tissues of the body and these are derived from the so-called ash constituents of the food. The calcium and phosphorus of the bones, the potassium and phosphorus of the soft tissues, the iron of the red blood cells are just as necessary "building materials" as are the proteins, though the amounts required are much smaller.

Upon the presence in the body of salts derived from the food, either directly or as the result of its oxidation in the tissues, depend such important properties and *processes* as the solvent power and osmotic pressure of the body fluids, the elasticity of the muscles, the maintenance of the normal neutrality or slight alkalescence of the blood and tissues.

These latter functions, and many others which might be mentioned as primarily dependent upon water and the salts, are hardly suggested by the phrase "tissue building," since they have to do not so much with the actual construction or repair of the tissues as with the regulation of the processes on which the nutrition of the body depends.

It is not to be inferred that any given food substance can be assigned once for all to some one of these three general functions. Thus the protein digestion products may serve both to build tissue and to yield energy; phosphates may serve both to build tissue and to assist in regulating the neutrality of the blood and tissues.

In this place he also speaks of the recently discovered food constituents vitamins and lipoids which occur in foods in very small amounts yet which are apparently extremely important. Of special value to the student are the author's summaries of the values of protein, fats, etc., which are concise yet accurate.

There are many features of the book which might be dwelt upon but perhaps the most interesting are some of the author's conclusions with reference to the place and value in the diet of food stuffs of different sorts.

After pointing out the fact that milk is a fairly economical food compared with others of animal origin he notes that:

The proteins of milk are of high nutritive value. When milk is taken under normal conditions (even in relatively large quantity and in connection with only a small amount of bread and other solid food), about 97 to 98 per cent of the milk protein is digested and absorbed. Numerous recent digestion and metabolism experiments indicate that under normal conditions it is as completely digested and absorbed as any of the food proteins, and has the advantage of not containing the substances which yield uric acid in the body, nor being readily susceptible to intestinal putrefaction.

Taking into consideration the many and important factors which increase the value of milk as food, above that indicated by its mere proximate composition and fuel value, and also the fact that it requires no preparation and has no waste, it is believed to be true economy to make liberal use of milk in the diet so long as the milk does not cost any more than twice as much in proportion to the energy it furnishes as the average of the food eaten. On this basis families who must live on as little as 16 to 20 cents per person per day for food may wisely use reasonable quantities of milk at 8 to 10 cents per quart, balancing this by a larger use of such food as bread, which furnishes energy much more cheaply than the average food of the diet. Those who are able to spend 30 to 40 cents per person per day for food are practicing true economy when they buy and use liberally the best milk obtainable even at a price of 15 to 20 cents per quart.

Especially in the feeding of children should milk be used freely, because of its many advantages as a "tissue-building" and "growth-promoting" food. "A quart of milk a day for every child," is a good rule easy to remember.

In no other way can the food habits now prevailing, especially in the cities, be so certainly and economically improved as by a more liberal use of good milk.

In the discussion of milk products it is noted that "generally speaking cheese sells at no higher price per pound than the ordinary cuts of meat, while it is considerably richer in both proteins and fat."

Cheese is very rich, not only in protein and fat, but also in calcium and phosphorus, since these elements in milk are largely in combination in or with the casein and so are concentrated with the casein in the process of cheese making. The iron-protein compounds of the milk are also retained in the cheese.

As the food value and digestibility of cheese become better known it should come to occupy a much more prominent place in the typical dietary than it does at present.

With reference to buttermilk and other fermented milks it is pointed out that they possess the same general advantages as milk which has not undergone fermentation. In view of the prominence which has been given to the theory that such products have special value the following conclusion is of interest:

The evidence at present available leaves the therapeutic value of fermented milks somewhat uncertain, but there is no doubt that they are valuable foods especially for those who either relish or digest the fermented milk better than the unfermented.

In discussing evaporated and condensed milk the author notes the fact that evaporated milk is "less perishable than fresh milk [which] is a decided advantage to purchasers who use milk for the manufacture of other products for which there is a fluctuating demand, such as ice cream and special bakery products."

In discussing cream it is noted that "market cream is apt to be at least half a day older than the corresponding grade of market milk and almost invariably has a higher bacteria content."

In the case of eggs the following generalizations are made:

There can be no doubt that the nutrients of the egg when absorbed from the digestive tract are of exceptional value in the nutrition of the body tissues. The richness of eggs in protein and fat and in compounds of phosphorus, iron, and calcium, all in forms especially adapted for conversion into body tissue, make the food value much greater than a comparison based simply on amounts of protein and energy would indicate.

Eggs are more nearly interchangeable with milk in nutritive value than is any other food, and they are richer than milk in iron. On account of this richness in iron (as well as the nature of the proteins and fats), eggs are among the first foods to be added to the milk diet of the young child, and if circumstances should arise in which no form of milk enters into the child's diet, the egg will come nearer furnishing a satisfactory substitute than will any other food. Normally, however, eggs should only supplement the milk of children's dietaries and should not be allowed to displace the milk to any appreciable extent. For the same reasons that it is adapted to the needs of the growing organism, the egg is also a very valuable food for adults who need to be "built up;" hence eggs are usually prominent in well-arranged dietaries for undernourished anemic people and especially for tuberculosis patients.

In addition to their well-known nutritive value, eggs are popular for other reasons. They are easily cooked in a variety of ways and by their admixture it becomes possible to make many modifications in the texture, flavor, and appearance of other food materials. Doubtless it is largely because the egg facilitates so many things in cookery which would otherwise be difficult or impracticable, that the demand for eggs keeps the price almost always higher than their food value, for general use, would seem to warrant. We have seen, however, that the real food value of eggs is much greater than a mere statement of the protein and fat content and energy value would indicate. When all the factors of food value are taken into account, a dozen eggs may fairly be considered worth as much in the dietary as two pounds at least of meat, so that, except in times of special scarcity, eggs are apt to be more economical than meat though not so economical as milk.

Much interesting matter not easily accessible to students is included in the chapters on meat, game, fish, and similar animal foods and the products made from them. Although meats differ greatly in the nutrients which they contain it is pointed out that "these differences are due in the main to simple variations in fatness." In addition to discussing the constituents of meat which are most commonly considered, the author devotes some attention to creatin, purines, and ash constituents.

With reference to meats and their place in the diet the following statements are of particular interest:

There is a decided excess of the acid-forming over the base-forming elements. For equal degrees of fatness, the different kinds of meat appear to be practically alike in this respect.

It is difficult to balance the advantages and disadvantages of meat as a food and to reach a confident conclusion as to just how prominent a place it should have in the diet, both because so many factors enter into the problem and because so many of those who have studied the subject and published their conclusions appear to have been more or less influenced by controversial bias engendered by the vegetarian propaganda.

On the whole it seems reasonable to the author to conclude from general conclusions which have been reached, such as Tigerstedt, from which he quotes as well as from results of statistical and experimental studies "that the average meat consumption in the United States is somewhat higher than is desirable on both economic and physiological grounds.

"When one-sixth instead of one-third of the total expenditure for food is for meats, the dietary is usually both more economical and better balanced."

In discussing gelatin it is noted that this is not simply a protein sparer as was commonly said before its chemical nature had been studied in connection with that of other nitrogenous constituents of animal and vegetable foods.

Gelatin is a true protein, but not "complete" as a protein food, the "incompleteness" of food value being doubtless due to the absence of certain amino-acid radicals, conspicuously tryptophan, in the gelatin molecule. If one were to depend very largely upon gelatin as food, it would be important that some other proteins, such as those of milk, rich in the par-

ticular amino-acids which gelatin lacks, should also be represented in the diet.

In the discussion of poultry it is pointed out that it has the same general composition as meat. With reference to special characteristics the author points out that:

The impression that light meat furnishes less of the substances which give rise to uric acid in the body does not seem to have been confirmed. Neither have we any evidence that the ash constituents differ in any important degree either as between light and dark meat or as between chicken meat and that of other animals.

[Poultry, game, fish, and shellfish] may be regarded as interchangeable with the ordinary meats. The comparative economy of these different types of flesh food varies widely with locality and season. While game has become so scarce and costly as to be no longer an important factor in the food supply, the prices of poultry, fish, and shellfish appear at present to be rising less rapidly on the whole than the price of beef. The breaking up of the great cattle ranges into small cultivated farms naturally tends toward a relative (perhaps not absolute) decrease in beef production and an increase (both absolute and relative) in poultry culture. Oyster culture is becoming systematized so that, while oysters will doubtless remain an expensive food, the supply will probably increase. The fishery industries are also capable of great development both by improved methods of handling the species now regarded as important and by utilizing as food the flesh of species which in the past have been neglected. Thus it is said that a few years ago sturgeon was so little prized as food that much of it was used as fertilizer, while now smoked sturgeon is in good demand, and that still more recently the garfish, formerly regarded merely as a pest, has begun to find a market as a food fish.

Since in the nature of the case the meat production of the country can not be greatly increased except at the cost of a restricted output of other farm crops, we may anticipate a constantly increasing tendency towards better conservation and more economical utilization of the fishery products as food.

Following the chapters devoted to animal foods are those devoted to grain products, vegetables, fruits, and nuts. The characteristics of the different grains are pointed out, and milling, bread making and cereal breakfast foods are discussed, while much recent work regarding the nature of the grains and their proteins is summarized. The work of Osborne and Mendel upon the grain proteins the author

characterizes as a "successful correlation of the chemical structure and nutritive function of the proteins, an accomplishment of the greatest importance in the scientific development of food chemistry."

[Each of the staple grains (wheat, barley, and maize) and the staple milling products made from them] contains a mixture of proteins, and the other proteins with which gliadin, hordein, and zein are always mixed in wheat, barley, and maize do not show these same peculiarities of chemical structure, so that we have no reason to fear that either lysin or tryptophan would ever be wholly lacking in any staple food product made from grain. Thus glutenin, which is always present in wheat flour, has been shown to be adequate for both maintenance and growth even when it was the only protein in the diet. It is, however, only reasonable to expect that the mixture of proteins found in corn meal or even wheat flour will be of somewhat less value in nutrition than an equal weight of the mixture of proteins which we find in milk, eggs, or meat. Experimental observations confirm this inference and indicate that when bread is the sole source of protein in the diet, a larger amount of protein is required for equilibrium than when milk or meat is eaten.

Fortunately the proteins of milk are relatively rich in those amino-acid radicals in which the grains are poor. . . . If bread be made with skimmed milk instead of water, or if breakfast cereal or even corn meal mush be eaten with cream or milk, it is possible that the protein of the combination may have fully as high a value in nutrition as the average protein of ordinary mixed diet.

Following are some of the statements with reference to fine wheat flour and other types:

Regarding the coarser and finer flours simply as sources of protein and energy, they are so nearly equal both in digestible nutrients and (at present, to the individual consumer) in pecuniary economy that they may be regarded as substantially equivalent and interchangeable. They are, however, quite different in the ash constituents which they contain and somewhat different in their effect upon the digestive tract.

The coarser wheat products stimulate peristalsis more than do the fine flour products, an effect which is desirable in some persons and undesirable in others. . . . The wheat kernel contains two distinct substances reported as having laxative effects which are largely rejected in the preparation of fine flour. These are the oil of the germ and the phytin (one of the phosphorus compounds) which is especially abundant in the bran. It is probable that in man the stimulation of peristalsis by whole wheat products is due in part to direct mild laxative action by one or both of

these constituents, and in part also to the mechanical effect of the fibrous particles.

The ash constituents of the grains are largely concentrated in the germs and outer layers. . . . Doubtless the loss in digestion is somewhat greater for the coarser than for the finer products in the case of the ash constituents as of the proteins, but there is no reason to suppose that the loss in digestion would in any case approach the loss involved in the ordinary milling process. The body probably absorbs from a pound of genuine whole wheat bread at least twice as much phosphorus, iron, and calcium compounds as from a pound of white bread.

It follows that the coarser flours contain more of the ash constituent than the finer. With reference to this fact and the pecuniary economy of grains we find the following:

Some writers and teachers treat the losses incurred in the ordinary milling processes as a matter of indifference or even object to any serious discussion of the problem, calling it a "fad" on the ground that with the mixed dietary prevalent in the United States there is no danger of the "deficiency diseases" from any mode of milling the grains. This is probably true as regards the pronounced diseases such as beriberi, but it is also true that many American family dietaries show little margin of safety as regards iron, phosphorus, and calcium, which makes it only reasonable that we should wish to include in the products used for human food as much as is practicable of those parts of the grain which are rich in these elements. Moreover, one should not overlook the great wastefulness of making from 100 pounds of wheat only 70 to 75 pounds of white flour when the same wheat will yield 85 to 95 pounds of flour practically equal pound for pound if the ash constituents be ignored, and more than equal if these constituents be considered.

The data regarding the composition and characteristics of fruits, vegetables, and nuts, as was the case in the chapters on other foods, supply much information not readily accessible to the student. The author points out that experimental evidence indicates that a fruit and nut diet is almost as completely and readily digested as an ordinary mixed diet, and further that "the fact that consistent fruitarians, both adults and children, maintain a well-nourished condition on diets of fruits and nuts which are of moderate total food value and low protein content is strong evidence that the nutrients of the fruits and nuts must be well digested and also efficiently utilized in metabolism."

From such data and a discussion of the nature of the proteid constituents of nuts the author concludes that:

Fruits and nuts are to be regarded as staple articles of food and by no means as simply relishes or accessories. By a consideration of composition and cost it will also be found that many of the fruits and nuts are quite economical as compared with many other staple foods. . . .

Not only the roasted peanuts but the best grade of almonds or of carefully prepared peanut butter is plainly a much more economical food than the steak, even when the latter is not charged with the cost of preparing it for the table.

With reference to the different fruits and vegetables it is pointed out that:

Differences in food value are due largely to the wide variations in water content, but also to the different quantitative proportions which the nutrients bear to each other, and in some instances to the presence of characteristic substances.

Considered as sources of energy potatoes and dry beans and peas are at ordinary prices about as economical as grain products and much more economical than the meats; while the dried fruits are comparable in economy as fuel with milk, butter, and the fatter and cheaper kinds of meat. Even those fruits and green vegetables which are eaten for flavor with little thought of food value and which are often thought of as luxuries because of their high water content will often be found to furnish energy at no greater cost than many of the familiar cuts of meat when account is taken of the extent to which the fat of the meat is usually rejected or lost in cooking or at the table.

That the dry legumes are both absolutely and relatively rich in protein is a fact so well recognized as not to require elaboration here. Less generally realized is the fact that while the green vegetables contain too much water to show high absolute values or percentages by weight of protein, yet they show as much or more of the total food value in the form of protein as is customary or desirable in ordinary dietaries. In fruits, on the other hand, the relative proportion as well as the absolute amount of protein is usually low. . . .

Taking the fruits and vegetables as a whole, while often more economical as sources of energy and protein than is generally considered, yet they are probably even more significant for their ash constituents than for the organic nutrients which they contain.

Much of interest is brought together regarding the mineral constituents of this group of foods; a matter of special interest since summaries of this sort are none too abundant.

As sources of iron the green vegetables are perhaps the most important of all our foods, while other vegetables and many fruits are also very important sources of food-iron. . . .

Since there has been among dietitians of the older school a tendency to regard meats as the main source of food-iron, a brief comparison of meats with vegetables and fruits from this standpoint may be desirable. . . . In proportion to cost the fruits and vegetables furnished much more iron than the meats and fish.

The question, however, is one of kind as well as amount. The iron in meat is chiefly due to the blood remaining in the small blood vessels with which the meat is permeated. The iron compounds of blood do not yield readily to the digestive ferments as do those of vegetables and fruits, so that the iron of the latter is better absorbed and becomes more completely available for nutrition than the iron of the meats.

Moreover the use of too much meat (especially by persons of sedentary habits or indoor occupation) tends toward excessive intestinal putrefaction with resulting absorption of putrefactive products which are detrimental to the red blood cells and probably in other ways interfere with the economy of iron in the body. Fruits, and vegetables, on the other hand, have the opposite property and their use in liberal quantities tends to prevent or correct intestinal putrefaction, both by stimulating peristalsis and by furnishing a medium less favorable to the activities of the putrefactive bacteria. . . .

The mild laxative tendency of many fruits and vegetables depends in part upon the fact that they furnish to the digestive tract a sufficiently bulky residue (largely of cellulose and related substances) to stimulate mechanically and render effective the peristaltic action, and in part upon the occurrence in many fruits and some vegetables of substances which, aside from the mechanical considerations, exert a mild laxative effect. Sometimes the raw fruit is found to be more laxative than the same fruit when thoroughly cooked. In some cases the astringent substances in the skin may counteract the laxative effect of the raw flesh of the fruit; thus some persons find the flesh of raw (or even stewed) apples too laxative, but experience no inconvenience when the skin of the apple is eaten with the flesh and the whole is thoroughly chewed.

Another important effect of eating fruit is the introduction of an acid substance into the digestive tract which later yields an alkaline or basic substance in the blood and tissues. This acidity of fruits is largely due,

not to free acids, but to acid potassium salts, of which the acid potassium tartrate (cream of tartar) of grapes may serve as an example.

It will be noted that in all the fruits and vegetables the percentage of potassium (expressed as K_2O in the table), is high either absolutely or as compared with the other ash constituents in the same food. Like the calcium, magnesium, and sodium, the potassium exists in the foods in part as neutral inorganic salts. In many cases, however, it exists to an even larger extent in combination with organic acids or other organic matter. . . . Those parts of plants which are used for food in the form of fruits and vegetables yield, on burning, a basic or alkaline ash due to the fact that the base-forming elements predominate over the acid-forming elements in these foods, chiefly because of the presence of the organic potassium compounds just mentioned. The surplus of base-forming elements which remains as carbonate and makes the ash distinctly alkaline when the food is burned at a high temperature in the air will, when the material is oxidized in the body, remain as bicarbonate, which is a practically neutral substance, yet capable of neutralizing acids such as the sulphuric acid produced in the protein metabolism.

A table showing potential alkalinity or excess of base-forming elements in various fruits and vegetables forms a valuable part of this discussion. Of particular interest to the housekeeper, if she accepts the author's conclusions, is the following generalization:

Since meats and eggs show a distinct excess of the acid-forming elements, while in vegetables and fruits the base-forming elements predominate, it follows that the greater the amount of meat, fish, and eggs eaten the more important is it that fruits and vegetables be also used liberally. A 100-calorie portion of potato furnishes just about the amount of base to neutralize the acid arising from the metabolism of a 100-calorie portion of steak. To serve a 200-calorie portion of steak with only a 100-calorie portion of potato is out of proportion. The grain products have an excess of acid-forming elements, not large enough to be objectionable when the diet is otherwise well balanced, but which may result in the diet as a whole becoming too strongly acid-forming if grain products are allowed to take the place of vegetables. Rice and potatoes are sometimes considered interchangeable, but from this standpoint cannot be so considered. When rice instead of potato is served with meat, not only is the excess acid from the meat left unprovided for, but more acid is added by the rice. Hence, even though the rice furnishes as much energy and protein, it cannot properly be regarded as of fully equal food value with the potato which it displaces.

In order to avoid too great an excess of acid in cases in which no dietary calculations are made, it is well to allow at least as much money for the purchase of vegetables, fruits, and milk (in which base-forming elements predominate) as for the purchase of meats, fish, and eggs (all of which are distinctly acid-forming).

While not yet fully understood, the vitamin content seems likely to prove a factor of some importance in the rôle of fruits and vegetables in the diet. The "antiscorbutic property" of these foods is well recognized. The evidence has seemed to favor the view that this property is chiefly due to the predominance of base-forming ash constituents, but recent work indicates that vitamin must also be taken into account in this connection.

Some of the advantages of fruits and vegetables as food cannot be expressed in quantitative terms, but even the factors which can be so expressed show that these foods, even when bought, as is usual, with reference to flavor rather than food value, are more economical than is generally supposed. . . .

The percentages of nutrients give an inadequate expression of the true value of fruits and vegetables as food. In fact the low protein, fat, and carbohydrate content which causes some of the fruits and green vegetables to be regarded merely as luxuries may at times be an actual advantage in enabling one to balance a dietary by adding these foods without either making protein or energy intake excessive or necessitating a restriction of the consumption of foods already in use.

Unquestionably the more general and more liberal use of fruits and vegetables is to be encouraged. Where the cost of food must be strictly limited, the dietary may often be improved by diminishing the expenditures for meats and sweets in order that vegetables and fruits may be used more freely.

Although the author's discussion of sugars, sirups, and confectionery does not immediately follow that of vegetables, fruits and nuts it seems interesting to take it up in connection with them. As in other sections the manufacture, chemical nature and other similar topics are considered. With reference to the place of sugars in the diet the author points out that dogmatic statements are apt to be seriously misleading, the problem being a complicated one and evidence in many respects being still obscure.

Until relatively recent times sugar was too expensive to be used freely by most people but with the development of the industry and the cheapening of the product the consumption of sugar has increased at an exceedingly rapid rate.

The thoughtful student of food problems must regard this development with mixed emotions. The cheapening of a staple article of food, which is almost universally popular and which, like the refined sugar of commerce, is of uniform and well-known composition and practically free from danger of adulteration or harmful deterioration, would be a source of great satisfaction but for the fact that refined sugar constitutes an extreme case of a one-sided food, its sole nutritive function being to serve as fuel so that, as the energy requirement of the body is met to a larger and larger extent by the consumption of refined sugar there is a constantly increasing danger of unbalancing the diet and making it deficient in some of the substances which are needed for the building and repair of body tissues and for the regulation of physiological processes. . . .

If the per capita energy requirement be estimated at about 2000 calories per day it follows that about one-fifth of the energy requirement is being met by eating sugar (of course not all of this sugar appears on the table as such) and that the intake of protein, phosphorus, calcium, potassium, iron, and other essential elements, and of such important though imperfectly understood substances as the lipoids and vitamins is on the whole about one-tenth lower than would be the case if the sugar were reduced one-half and the energy now derived from sugar were supplied by an increased consumption of the other articles of food. Are we to assume that the ordinary dietary of the people of the United States furnishes such an abundance of all the essential elements and each specific necessary compound that a difference of 10 per cent in the intake is of no consequence? The investigations of recent years indicate clearly that no such assumption is justified. As regards some of the elements such as calcium and phosphorus there is very little margin of safety in the majority of American dietaries. From this standpoint it would be an improvement if without other change in dietary habits the sugar consumption were reduced, say to one-half the present rate, and the same amount of energy obtained by increasing the consumption of other food materials. . . .

The objection to the too free use of sugar, on the ground that it serves only as fuel and may replace to an undue extent other food materials which meet other nutritive requirements, applies equally to commercial glucose and to most candy. It does not hold to the same extent as regards molasses and those sirups which contain the natural ash constituents of the plant juices. Probably the most desirable of all materials with which to satisfy a desire for sweet-tasting foods are the fruits several of which contain from 10 to 15 per cent of sugars in the fresh state and from 50 to 75 per cent when dried. . . .

In addition to the question to what extent sugar may be allowed to displace other foods without danger of making the diet one-sided, there

are several other considerations which should be kept in mind in attempting to assign to sugar its proper place as a food. . . .

The fact that sugar may have a disturbing influence upon digestion does not imply that the sugar itself is at all likely to escape digestion. . . .

Athletes and farm laborers at hard work have in many instances been observed to take large quantities of sugar, often as lemonade or in admixture with other fruit juices, without any apparent ill effects. In such cases the sugar is employed to furnish the extra energy required for the muscular activity and so does not necessarily tend toward a sub-normal intake of the foods which are valuable for their ash constituents as well as their energy. In fact when the sugar is taken with fruit juices the consumption of the latter may thereby be increased.

As in other cases the summaries of data regarding the manufacture, composition, characteristics, etc., of fats and oils, though concise, are full of useful information.

Edible fats and oils of animal and vegetable source are separated on a commercial scale from a great variety of food materials, "butter from milk; oleomargarine, lard, and suet from meat fats; corn oil from grain; olive oil from a fruit; peanut (arachis) oil from a legume seed of nut-like character; cocoanut oil from a true nut; cotton-seed oil from the seeds of a plant of still a different family. Of the various food fats of commerce, butter is, in America at least, by far the most prominent, and the butter industry will therefore be treated more fully than the other fat and oil industries."

The following statements are of especial interest as they refer to a type of culinary fats which has recently come on the market and become common.

In recent years the transformation of liquid glycerids of unsaturated fatty acids into the corresponding saturated compounds which are solids, with resultant thickening or hardening of the fat containing such glycerids, has been developed on a commercial scale. Cotton-seed oil is the material chiefly used in this country, and the "hydrogenation" is accomplished by heating with hydrogen in the presence of nickel as a catalytic agent, the process being carried to such a point as to yield a product of the appearance and consistency of lard.

The well-known fact that fats have an energy value twice that of protein or carbohydrates is pointed out together with the fact less commonly thought of that most food materials which contain a mixture of nutrients owe their energy value largely to their fat content.

With reference to the place of fat in the diet the author notes that:

The food fats which appear in commerce in an approximately pure state are closely similar to, if not identical with, those which have already entered into our consideration. Hence there is no occasion to question the general wholesomeness and food value of such staple food fats as butter, oleomargarine, lard, olive oil, cotton-seed oil, etc., and we need only consider whether these are of equal value with each other and whether their liberal use is likely to make the total fat content of the diet excessive or the diet one-sided in any way.

The fats ordinarily used as food by man do not differ greatly in the extent to which they are absorbed from the digestive tract under normal conditions. Such differences as have been found seem to be explained by the differing hardness or melting points of the fats.

As regards "digestibility" in the more popular sense of relating to the ease, comfort, and rapidity with which the digestive organs carry on their work, it may be said that the fats generally retard the secretion of the gastric juice and tend to make the food stay longer in the stomach. To the extent that the ease of digestion is inferred from the rapidity with which a meal passes from the stomach into the intestine the eating of fat appears to retard the process, and this is true to a greater extent the higher the melting point of the fat.

While the eating of much fat may thus prevent the digestion of food in the stomach from going forward as promptly and pleasantly as it otherwise might, it is unlikely that the fat will exert any direct effect tending toward discomfort except in the sense that if fat is overheated in cooking it may in part be decomposed with the production of irritating substances. It should also be remembered that if foods are cooked in or with fat in such a way as to form a coating of fat over the other constituents of the food, the digestion of the proteins and carbohydrates may be retarded, since the materials which are coated with layers of fat will not be permeated readily by the saliva or the gastric juice. These latter possibilities of unfavorable action of fat are not properly chargeable to fat itself, but rather to the unintelligent way in which it is sometimes cooked.

Fats are less susceptible to objectionable decomposition by the bacteria of the digestive tract than are proteins and carbohydrates.

In metabolism fat can serve interchangeably with carbohydrate as fuel within very wide limits. The different food fats have nearly the same fuel value when in the same state of purity. . . .

Recently it has been discovered that the energy value of its fat content does not express the entire food value or nutritive function of butter.

Fat, being a very compact form of fuel, properly finds its largest place

in the diet in those cases in which the energy requirement is high, as in persons doing large amounts of muscular work or exposed to severe cold. In such cases there is largely increased need for fuel without corresponding increase in the need for protein or for other specific nutrients. Here a large part or even all of the extra energy requirement may be met by feeding practically pure fats, and it has been found the organism, whether at hard muscular work, or only moderate exercise, is able to digest quite large amounts of fat.

While it is true that the average consumption of fat is not excessive and that those who need an especially abundant fuel supply can use with advantage amounts of fat much greater than the average, it is probably also true that many persons of only average activity and energy requirement are using considerably more than the average amount of butter, which as already stated amounts to less than an ounce per person per day. A consumption of one pound of butter per person per week is more than twice the average amount, but instances of families in which butter is thus liberally used will doubtless be familiar to many of the readers of this book. In such instances, it will be well to consider whether some of the money spent for butter might not more wisely be expended for milk.

A pound of butter is equal in energy value to 5 quarts of milk, but in view of the proteins and ash constituents, which the milk contains, it would probably be wise to consider that 3 quarts of milk fully equal 1 pound of butter as an asset in the dietary, except perhaps in those cases in which the energy problem distinctly predominates. To pay much if any more for a pound of butter than for 3 quarts of milk will usually mean either that an extravagant price is being paid for butter or that the milk used is below the quality which the consumer can afford and should demand.

If any considerable number of consumers should decide to buy less butter and more milk, the diminished demand for butter and increased demand for milk would result in bringing to market some of the milk now used for butter-making. This would not appreciably disturb agricultural conditions and would plainly tend toward a better conservation of resources for the community as a whole, because under present conditions the skimmed milk of the butter factories is not generally utilized to good advantage. Economically therefore the making of butter should, for the most part, be carried on in regions which are adapted to dairy farming, but too remote from cities and towns to send their milk to market, or in districts in which it is feasible to make good use of the skimmed milk.

Following the chapters on foods is a chapter dealing with food adjuncts and some unclassified food materials, including spices, mince-meat, tea, coffee and cocoa, yeast, vinegar, flavoring extracts and herbs.

Fruit juices, sometimes classed as beverages, are about equally entitled to recognition as foods with the fruits from which they are obtained.

The statements regarding the condiments as food adjuncts are in most cases limited to descriptive matter, since such articles are not of great importance economically or as part of our food supply.

In the appendix much information is given regarding the enforcement of the food and drugs act, the federal food inspection decisions, methods and standards for the protection and distribution of certified milk, and federal meat inspection. A table of 100-calorie portions is also given, which includes not only the weight of the material both as purchased and on the edible portion basis but also the protein, energy supplied by the protein, the calcium phosphoric acid, and iron content and the excess of residual acid or base.

The index and numerous illustrations add to the usefulness of the volume.

In making such an extended summary as the above, other passages might have been quoted which the reader would find of value also, but enough has been given to show that as a reference handbook the volume will prove very useful.

SEQUENCE OF SUBJECTS

An experienced teacher of Home Economics furnishes the following story. She was visiting a class which was in charge of a very attractive and very fluent young woman. She says:

In trying to find out the basis for her work, I wondered whether she was making her division of foods according to the seasons, as was sometimes the custom in public schools, or according to the classification of batters, doughs, etc., or whether she was taking the types of food that belong to one of the principles, such as protein or fat or carbohydrate and grouping her work around those principles. I asked two or three questions without making any progress in finding out what I wanted to know. Evidently, the instructor did not understand my language. Finally, she produced a pamphlet of recipes with this remark, "We don't all follow the same order, but all the recipes we use are in this book." I grasped eagerly at that word "order" and felt at last that I was arriving and said, "Now tell me what order do you follow." She replied, "I begin with potatoes, and after we have had potatoes awhile, we make chocolate and that leads, naturally,

to creamed cabbage and creamed soups." I fairly gasped in my amazement. Of all the varied suggestions that have come to me in the years, no one had ever said that chocolate suggested creamed cabbage. I felt that in fairness to the girl, I must get her viewpoint, that I was certainly misinterpreting her, so I made one more attempt to understand her method of procedure, and said, "Tell me, why did you take chocolate after potatoes?" She replied, "Well, you know, potatoes aren't very interesting. The girls get tired of them, and then we make chocolate and they drink it, and they like it, and that arouses their interest." I felt rewarded. I understood now that that woman had been told that it was essential that she should interest her pupils and she had done it and arrived at creamed cabbage from potatoes by drinking chocolate! I regard this story as a wonderful illustration of sequence in subjects and understand the criticism of our pedagogical friends who used to say that the material of Home Economics was not so classified and arranged as to have pedagogical value.

EFFECT OF FOODS UPON ALUMINUM COOKING VESSELS

JOHN GLAISTER

Regius Professor of Forensic Medicine and Public Health in the University of Glasgow

In accordance with instructions of The Aluminum Castings Company, Limited, Greenock, I have submitted to severe tests the aluminum cooking vessels sent to me, and also the pieces of rolled metal aluminum, with a view of discovering whether or not during the process of cooking of foods any, and if any, what amount of that metal is so dissolved, and, further, whether any aluminum exists in the soluble form as aluminum chloride. These experiments covered a period of about three months, and very great care has been expended upon them to secure accuracy.

Two sets or series of experiments were made: Series A which deal with the effects of such foods as fat bacon, dripping, milk, oranges and lemons to form marmalade, brussels sprouts, and tomato sauce, all cooked as they would be in the kitchen; while Series B consisted of laboratory experiments with square pieces of the metal and their exposure to such substances as solutions of common salt, acetic acid, bicarbonate of soda, a mixture of common salt, tartaric acid, and citric acid, as well as distilled water, soft water (Loch Katrine), and hard water of 38 parts per 100,000 of hardness from an artesian well. The results are duly noted with respect to each experiment.

The aluminum cooking vessels used in the following experiments grouped under Series A consisted of the following: Frying pan of 9" or 24 cm. diameter; lipped milk saucepan, of 6" or 15.8 cm. diameter, capacity 2 pints; deep stewpan, 5½" or 14 cm. diameter, capacity 2½ pints; pudding bowl, 3½" or 8.9 cm. diameter, capacity ½ pint.

Experiments were undertaken to ascertain if aluminum is taken up by foods during the process of cooking, and, if so, in what quantity, and whether or not as a soluble compound (for example, aluminum chloride) of aluminum.

Method employed in estimating aluminum compounds in foods. After cooking, the food used was incinerated in a platinum capsule. The resulting ash was then extracted with hydrochloric acid, and filtered.

Ammonium hydrate in excess was then added in order to precipitate the phosphates.

Acetic acid was then added in excess; thus dissolving all but aluminum and iron phosphates.

The aluminum phosphate and the iron phosphate were next filtered off, and the filter washed with hot distilled water till free from soluble salts.

The filter containing the aluminum and iron phosphate was then dried, ignited, and weighed.

The residue was dissolved in hydrochloric acid, diluted to a definite volume with distilled water, and the iron estimated by a colorimetric process. The amount of iron found was calculated in terms of iron phosphate, and its weight together with the weight of the filter ash when subtracted from the total weight, gave the weight of aluminum phosphate present. The amount of this aluminum phosphate was then calculated in terms of aluminum hydroxide ($\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$), in which form the results are stated.

Series of experiments. Two series of experiments were carried out.

In the first series, the food employed was cooked in the aluminum vessels after the manner of the kitchen, and the total aluminum compound present (if any) in the foods was estimated.

In the second series chemical substances likely to attack aluminum were used, and a search thereupon made for soluble aluminum compounds. Control experiments were employed in each case.

FIRST SERIES OR SERIES A

I. *Bacon*. A piece of fat bacon weighing 100 grams (approximately $\frac{1}{4}$ lb.) was fried in an aluminum frying pan till thoroughly cooked. The cooked bacon was then incinerated in a platinum capsule and treated as before described. The superficial measurements of the bottom of the cooking vessels were 298.6 sq. cm.

Result. No aluminum compounds were found. A control test with 100 grams of bacon (uncooked) incinerated in a platinum capsule also gave a negative result. The possibility of aluminum compounds being present in the materials used in curing and preserving bacon and ham must be kept in mind.

II. *Dripping*. 100 grams of dripping was melted in an aluminum frying pan until it smoked.

It was then allowed to cool and to remain in the pan for three weeks. At the end of this period it was melted, poured into a platinum capsule, ignited to ash, and examined for aluminum.

Result. No aluminum was found. A control test with 100 grams of dripping uncooked also gave a negative result.

III. *Milk*. Milk amounting to 250 cc. was boiled for 10 minutes in an aluminum pan, the milk afterwards being evaporated to dryness in a platinum capsule, incinerated, and tested.

Result. No aluminum found.

IV. *Oranges and lemons*. As these two fruits are used together in certain recipes for making marmalade, in order to facilitate subsequent incineration before testing for aluminum the fruits were used as follows:

The juice was expressed from two oranges and one lemon, the rinds and pulp chopped up, and the whole covered with about 700 cc. boiling distilled water, and thereafter macerated for 24 hours. The liquid therefrom was then strained off and the remainder of the juice expressed from the rind and pulp by a tincture-press. To the combined fluids distilled water was added to bring up the total amount to 1000 cc., which was then divided and used as follows:

(a) 500 cc. were placed in an aluminum pan and boiled for one hour, then evaporated to dryness in a platinum capsule, incinerated, and tested for aluminum. Superficies of surface of aluminum vessel exposed to food = 310 sq. cm. (b) 250 cc. were used as control and were treated as in (a). (c) Portion of remainder was titrated for its acidity $\frac{N}{10}$ NaHO.

Results. From (a) which was equivalent to one orange and half a lemon, $\text{AlPO}_4 = 0.0489$ gram; $\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O} = 0.066$ gram = 1.018 grains. From (b). Control. Aluminum = none.

From (c) acidity of total 500 cc. used in (a) in terms of crystallised citric acid ($\text{H}_3\text{G}_6\text{H}_5\text{O}_7 \cdot \text{H}_2\text{O}$) = 2.1 grams.

V. *Brussels sprouts*. An extract was made as in experiment IV. 300 grams of the vegetable was cut up, covered with 700 cc. of distilled water, and boiled in a glass vessel till vegetable was cooked. This was allowed to stand overnight. An extract was obtained as in the previous experiment, which was made up to 1500 cc. and used as follows:

(a) Control. 500 cc. were evaporated to dryness in platinum capsule, incinerated, and tested.

(b) 300 cc. with 3 grams of common salt added were boiled in an aluminum pan for 20 minutes, were evaporated to dryness in platinum capsule, incinerated and tested.

(c) 500 cc. with 3 grams of common salt and 2 grams of sodium bicarbonate added were treated as in (b).

Results. (a) Control. No aluminum found. (b) $\text{AlPO}_4 = 0.0073$ gram, $\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O} = 0.0096 = 0.148$ grain. (c) $\text{AlPO}_4 = 0.0067$ gram; $\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O} = 0.0088$ gram = 0.135 grain.

Superficies of surface of aluminum vessel exposed to food = 310 sq. cm.

VI. *Tomato sauce*. This was made as follows: Tomato = 200 grams (approx. $\frac{1}{2}$ lb.); malt vinegar = 70 cc. (approx. $2\frac{1}{2}$ fl. oz.); common salt = 14 grams (approx. $\frac{1}{2}$ oz.). The above, mixed together, was stirred in an aluminum pan for one hour. The product was allowed to remain in the pan for 5 hours. It was then weighed into equal portions. One portion was dried, incinerated, and tested for aluminum. The second portion was returned to the aluminum pan for 19 more hours (it was thus in contact with the aluminum vessel for 24 hours altogether) and was then treated as before.

Results. Sample treated for 5 hours. $\text{AlPO}_4 = 0.0161$ gram; $\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O} = 0.0212$ gram = 0.327 grain.

Sample treated for 24 hours. $\text{AlPO}_4 = 0.018$ gram; $\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O} = 0.0242$ gram = 0.373 grain.

Superficies of surface of aluminum vessel exposed to food = 236 sq. cm. A control experiment was made of the above in which half

the foregoing quantity was employed, but without exposure to aluminum vessel.

Result. = No aluminum found.

Acidity of above mixture. 50 grams of tomatoes were mashed, covered with distilled water and left overnight, then filtered and washed several times with boiling distilled water. To the filtrate 17.5 cc. of malt vinegar and 3.5 grams of common salt were added, and the mixture made up to definite volume. A portion of this was titrated with $\frac{N}{10}$ NaHO, and the acidity of the total 200 grams of tomatoes, 70 cc. of vinegar and 14 grams of common salt (used in experiment) calculated. Total acidity = 4.608 grams in terms of acetic acid.

SECOND SERIES OR SERIES B. QUALITATIVE EXPERIMENTS

The qualitative experiments in this group were undertaken as a result of what was found in Series A, aluminum in small amounts having been found from cooking experiments where there were present organic acids, common salt, and sodium bicarbonate. The experiments in this series were essentially of the laboratory type as opposed to the culinary type in Series A.

The special object of the experiments in this series was to demonstrate the presence or absence of *soluble* compounds of aluminum.

The method employed was to place a square of aluminum rolled metal measuring 58.15 sq. cm., thus giving an exposed surface of metal of that superficies, in a platinum capsule, and to cover it with solution of the substance to be treated, or, if fluid, the fluid itself. The contents of the capsule were then boiled, distilled water being added from time to time to make good the loss by evaporation. At the end of the time of exposure, the fluid was filtered, and the filtrate tested for soluble compounds of aluminum. Insoluble aluminum compounds, if any, were retained on the filter. The aluminum squares used were smooth and polished on their surfaces except at the edges which were rough. The action (if any) which took place was always most marked along the rough edges of the metal plates.

I. *Common salt.* A 1 per cent solution of common salt was used and the boiling process kept up for 3 hours.

Result. No soluble aluminum compound was found. Traces of suspended aluminum insoluble compounds were found. In this ex-

periment the action of the solution was practically confined to the rough edge of the metal plate.

II. *Acetic acid*. A 1 per cent solution of glacial acetic was used, and the boiling continued for one hour.

Result. Neither soluble nor insoluble aluminum compounds were found.

III. *Sodium bicarbonate*. A 1 per cent solution of this salt was used and the boiling maintained for one hour.

Result. Traces of aluminum detected in solution.

IV. *Common salt, tartaric acid, and citric acid*. A solution containing 1 per cent of each substance was used and boiled for 3 hours.

Result. No soluble aluminum compound found, but traces of insoluble compounds found.

V. *Experiments with different kinds of potable waters*.

Method. An aluminum vessel, filled with the water sample, was placed on top of a radiator and kept there 24 hours, the pan and contents being therefore under conditions such as are commonly experienced when a vessel is left standing on a kitchen range. The water thereafter was concentrated and tested.

Distilled water. No aluminum compounds.

Soft water (Loch Katrine). No soluble aluminum compounds; minute traces of insoluble aluminum compounds.

Hard water from artesian well. Total hardness = 38 parts per 100,000. No soluble aluminum compounds; very minute trace of insoluble aluminum compounds.

General results. The largest amount of aluminum was found in experiment No. IV. The proportions of fruit used would give, after the necessary addition of sugar and water, 2 lbs. of marmalade, according to the recipe used. This amount of marmalade, would contain 0.066 gram or 1.018 grains of aluminum hydroxide, which is perfectly harmless even if the whole 2 pounds of the preserves were eaten at one time, which is highly improbable. No aluminum chloride was found in any of the experiments, and the largest amount of hydroxide found would, if converted into chloride in the stomach still fall far short of the medicinal dose of aluminum chloride.

From the foregoing experiments, therefore, I feel justified in saying that the use of aluminum cooking vessels for culinary purposes is not attended by any risk to the health of the consumers of food cooked therein.

INFANT FEEDING¹

RUTH WHEELER

University of Illinois

The importance of the first year of a baby's life can hardly be overemphasized. In this fact there is a warning but there is also a great opportunity; for during the long period of frailness, while the tissues, even the bones and especially the nervous system, are plastic and still in the process of formation, any hereditary weakness can be corrected by proper care and diet to an extent impossible with other animals. The health, strength, and even the rate of growth through the whole life may depend upon the diet and other factors of the first year of life; for while slow growth in early life is often entirely made up later, this does not always follow.

It is not safe to base judgment as to whether the baby's diet is satisfactory entirely upon gain in weight, for this may mean simply that fat is being deposited in the tissues, whereas a proper growth must involve proper development of the tissues themselves. Long-continued gain in weight at a proper rate is a good criterion, but we dare not wait a year or so for this test and we can not analyze the baby's tissues and so the next best thing is to find out as much as possible about the foods that are available and about the ways of judging whether a given diet is doing what it should for the child.

Among the studies of various foods as to their usefulness in promoting normal growth and development, experiments with animals are of importance; for while it is never safe to infer that a food will have the same effect on one species of animal, a baby for instance, that it has on another, as a young cat or mouse or pig, certain fundamental principles can be established when we choose animals with a digestive system similar to that of human beings; it is surprising how similar the results often are. In most of the cases recorded, foods that allow normal growth of babies also allow normal growth in young animals of certain other species.

If the mother is healthy and normal no artificial food can compare with mother's milk. In the first place, it is adapted to the natural growth of the baby. The close relation between the composition of the milk of various species of animals and the rate of growth of their

¹ A lecture delivered at the Winter School of the University of Illinois, January, 1914.

young was pointed out long ago by Pröscher² and is shown in the following table.

Composition of milk and rate of growth of animals

ANIMAL	PROTEIN	ASH	TIME TO DOUBLE WEIGHT
	<i>per cent</i>	<i>per cent</i>	<i>days</i>
Human.....	1.6	0.2	180
Horse.....	2.0	0.4	60
Cow.....	3.5	0.7	47
Goat.....	3.7	0.78	22
Sheep.....	4.9	0.84	15
Pig.....	5.2	0.80	14
Cat.....	7.0	1.02	9.5
Dog.....	7.4	1.53	9
Rabbit.....	14.0	2.50	6

In the second place, mother's milk is especially adapted to the baby's digestive organs, as cow's milk is especially adapted to the digestive organs of the calf. Cow's milk differs from human milk in the character as well as in the relative proportion of the food substances present as is shown in the following table

Comparison of human and cow's milk

KIND OF MILK	PROTEIN	SUGAR	FAT	ASH
Human.....	1.2	5.8	3.4	2.4
Cow's.....	3.5	4.8	3.7	0.7

The tougher curd formed in cow's milk in digestion, easily disposed of by the relatively large four-fold stomach of the calf may be a difficult matter for the stomach of the baby.

Third, mother's milk is perhaps especially adapted to use by the tissues after absorption. It is possible that the greater resistance to disease shown by breast fed infants is partly due to the absorption with the milk of definite immune bodies.

Fourth, a child nursed by its mother is almost certain to receive closer care and greater watchfulness than an artificially fed baby. As one nutrition specialist put it: "You can't replace a mother's love and care with a steam sterilizer."

² *Ztschr. f. Physiol. Chem.*, xxlv, pp. 285-305.

In a careful study made with guinea pigs Moros³ found that those artificially fed from birth had the slowest rate of growth; that there was an increasing rate of growth with those left with the mother two, three, five, seven, etc., days; and that the rate of growth after weaning was greater in the animals that had the mother's milk for the longer period.

All these considerations emphasize the tremendous advantage which the baby has as a result of even partial nourishment with the mother's milk. In some cases, however, artificial feeding is necessary; for example, if the mother is tuberculous or syphilitic or very frail or if the milk poisons the baby. In these cases milk modified to resemble human milk and to satisfy the changing nutritive requirements of a growing child, is generally the best food. Babies fed various flour foods exclusively have been shown to be especially subject to such conditions as infantile scurvy. The milk used must, of course, be clean and pure and in general from a herd rather than from one cow. Some responsible person should examine the dairy from which the milk is obtained to be sure that sanitary conditions exist. The milk should receive the most scrupulous care, should be fed before it is twenty-four hours old, and should be kept cool until just before feeding time. Even on ice, deterioration has been known to take place in milk before it sours.⁴ At higher temperature the change is more rapid. It should, therefore, not be kept at the temperature at which it is fed. Thermos bottles if used at all should be used to keep the milk cold, not warm. All bottles used to hold milk should be carefully sterilized, for bacteria, harmless in small numbers but multiplying rapidly in unclean bottles, may mean poison by feeding time. Several systems of modifying milk are in general use, and so well known as to need no detailed discussion here. The substances added serve two special purposes: to lower the high protein and salt content of cow's milk and to prevent the formation during digestion of the characteristic hard curd.

In judging whether the diet is agreeing with the baby, the following criteria are valuable. First, improvement in weight and general appearance and behavior, second, the character of the faeces. The mother can learn to judge from the faeces which part of the food is not being digested but she should seek from a physician informa-

³ Pennington, et al: *T. Biol. Chem.*, 16 (1913), p. 331.

⁴ Experimentelle Beiträge zur Frage der künstlichen Säuglingsernährung, *Munch. med. Wochenschr.*, 54, (1907), p. 2225.

tion on this point. Often a milk diet is given up and dangerous experimenting is begun with first one food and then another when a simple lessening in the amount of fats or of sugar in the milk fed is all that is necessary.

If the baby actually is unable to digest milk, other foods, in general less desirable as well as much more expensive must be resorted to. Some studies of commercial infant foods now in progress in this department indicate that some of these foods fed as an exclusive diet to young animals (white mice) result in a normal rate of growth, while others do not support life for any great length of time. Added to milk, some of the otherwise unsatisfactory foods promote rapid increase in weight, but how far the mixture is superior to some more simply modified milk is not yet certain. The increase in cost involved in the use of these prepared foods is considerable.

EXECUTIVE SECRETARY'S REPORT

After the opening of the war it became apparent that the Executive Secretary chosen at the Cleveland meeting could not begin an active campaign for additions to the Richards Fund. The council, at the meeting in October, withdrew that plan, and advised visits to as many sections of the country as possible, with the purpose of arousing interest in the American Home Economics Association as a means for united effort.

To that end a brief notice appeared in the JOURNAL stating that the services of the secretary could be secured by schools, clubs, etc., ready to pay expenses of travel and entertainment. To equalize these, a careful estimate was made fixing the sum at \$25 for two days, the American Home Economics Association being responsible for the secretary's salary. This rate afforded a slight surplus which paid expenses at two or three educational conferences. Several schools have been visited that bore no share in expenses.

On this basis a three months' trip has been made covering nearly ten thousand miles and including visits to over forty schools in seventeen states.

It is evident that the teachers and club women appreciate the need of the American Home Economics Association and are ready to be shown how to help it most. The army of students in these schools and colleges will, in a few years, be the strongest supporters of the Association and its JOURNAL.

In several colleges junior Home Economics clubs are already in existence, and more are to be formed. Such clubs will train students to be efficient workers for Home Economics whether they become teachers or not.

At nearly every place there was some special reception or student dinner arranged especially in honor of the Secretary but it is impossible to give special recognition here for each entertainment.

Everywhere the Home Economics courses attract a good proportion of the students. Perhaps some more general courses should be provided for the girls who do not wish to specialize in this direction.

The teachers are doing good work, but need just the help the JOURNAL can give. All the great training schools may be proud of the women they have sent out. These are working together—often half a dozen schools are represented in the force of teachers in a single city or institution—to adapt their courses to the conditions they have to meet.

The itinerary of the trip worked out as follows:

February 1. Ohio State University, Columbus, Ohio. Farmer's Week; Demonstration Lecture; Address on Home Economics.

February 2. Parkersburg, W. Va. Woman's Club.

February 3. Hood College, Frederick, Md.

February 4. Washington, D. C. Home Economics Club.

February 5. Winston-Salem, N. C. College Students at Chapel; Demonstration lecture.

February 6. Greensboro, N. C., Normal College. Talks to several classes and to student body at Chapel.

February 8-9. Winthrop College, Rock Hill, S. C. Chapel; Lectures and demonstrations.

February 11-12-13. Newcomb College. New Orleans, La. Demonstrations and talks to classes; Meeting of city teachers; Reception and address at Woman's Club.

February 16-17. Tallahassee, Fla., College for Women. Talk at Chapel; Demonstrations and lectures before students and county agents of canning clubs.

February 18-19. Jacksonville, Fla., Woman's Club. Four lectures and demonstrations.

February 20. Ocala, Fla., Woman's Club. Two lectures.

February 23. Lake City, Fla. Talks in two schools; Demonstration lectures.

February 24-25. Stetson University, Deland, Fla. Lecture; Talk at Chapel; Demonstration.

February 26. Gainesville, Fla., Woman's Club; Lecture and demonstration.

March 3-4. Savannah, Georgia. Talks in three schools; Lecture and demonstration for club.

March 5-6. Raleigh, N. C. Talks at schools; Lecture at Meredith College.

March 8. Salem, Va. Talk at High School. Roanoke Woman's College; Chapel address; Demonstration lecture.

March 9-10. Harrisonburg, Va., Normal School. Two mornings in Chapel; Two demonstration lectures and two others.

March 15. Albany, N. Y., Woman's Club. Lecture on Business of Living.

March 19. Providence, R. I. Address to Teachers of Household Arts.

March 22. Detroit, Mich. Demonstration lecture under auspices of City Home Economics Club at Thomas Training School for Teachers.

March 23-26. University of Illinois, Urbana. Department of Household Science; Talks and demonstrations to students and extension workers.

March 29. DeSoto, Mo., High School. Demonstration lecture; Address in evening.

March 30-31. University of Missouri, Columbia. Lecture, Demonstration lecture.

April 1. Kirksville, Mo., Normal School. Talks in Chapel, and with classes.

April 2-3. Kansas City, Mo. Demonstration at Y. W. C. A. Hall; Talk for city teachers.

April 5. Independence, Mo. Demonstration lecture.

Liberty, Mo. Talk to students and other women.

April 6. Webb City, Mo. Demonstration lecture.

April 7. Joplin, Mo. Talks to classes; Evening address.

April 8. Maryville, Mo. Demonstration lecture; Address.

April 9. Omaha, Neb. Address to students at Brownell Hall; Address to students and club, High School.

April 10-12. University of Nebraska. Talks to students and Omicron Nu Club; Two demonstration lectures.

April 13-14. Manhattan, Kansas, State Agr. College. Demonstration lecture; Talks to students and extension workers.

April 15-16. Lawrence, Kansas, State University. Lecture to students and public; Demonstration lectures.

April 17. Warrensburg, Mo. Address at Teacher's Institute.

April 19. Nashville, Tenn. Talks to classes, Ward Belmont College; Address at Chapel, etc., George Peabody College.

April 20-21. Knoxville, Tenn. Conference of Southern Mountain Workers.

April 21. University of Tennessee, Knoxville. Talk to students.

April 22-23. Athens, Ga., Normal School. Two demonstration lectures; Talk at Chapel and before classes; Talk at Lucy Cobb College.

April 24. Milledgeville, Ga., Normal and Institutional College.

April 27-29. Chattanooga, Tenn. Southern Conference for Education and Industry.

April 30-May 1. Spartanburg, S. C., Converse College.

May 4. Drexel Institute, Philadelphia.

ANNA BARROWS, *Executive Secretary*.

AN EXPLANATION

A Comparison of Methods of Cooking by Cornelia French, published in the April (1914) JOURNAL, was a piece of independent student work, done at Pratt Institute, and unrevised. It was printed as offering some interesting and suggestive data, but not as authoritative, and the footnote explained that it was taken from a student's thesis.

As some of our readers have taken exception to the results, we are glad to explain that while the figures given were worked out accurately, other experiments show that the methods used were extravagant. Had more economical methods been used the comparative results would have been quite different.

THE GIRLS' CANNING CLUBS

A movement designed primarily to help girls on the farm to earn money by canning vegetables and fruit has grown amazingly in the last few years under the United States Department of Agriculture, the state departments of agriculture and state agricultural colleges. The work has been helped by funds granted by the General Education Board, and this work will now be broadened and carried on by the Department of Agriculture under the Smith-Lever Bill grant for extension education in agriculture and Home Economics.

These canning clubs are offering a golden opportunity for the teaching of Home Economics in rural districts, the organization being already effected on the natural basis of a greatly needed industry. What is now called for is that the canning club directors should receive the best training in Home Economics that they may teach these girls the latest knowledge applicable to the improvement of life in the farm home.

EDITORIALS

Annual Meeting of the American Home Economics Association. Following the trend of travel in 1915, the American Home Economics Association has appointed the 1915 meeting on the Pacific Coast.

The first sessions will be held at the University of Washington, August 19 to 21, and an adjourned meeting at Oakland, California, August 26 to 29, in connection with the National Education Association. A program is in preparation for both meetings, which will embrace subjects under science, art, methods of teaching and extension projects. Specialists in these subjects from western institutions, with a few speakers from the East, have been invited. The program will be formed in the interests of the western field of Home Economics as far as possible.

The program for August 26, at Oakland, will be in connection with a Congress on Vocational Education and Practical Arts in combination with the National Educational Association. The program of the Congress is to be full of interest to persons interested in Home Economics. The date of this Congress was changed to meet the needs of the Home Economics teachers, who are fortunate in having the benefit of the program prepared for the Vocational Educational Conference.

The department of special events of the Panama-Pacific International Exposition, has designated August 27 as International Home Economics Congress Day.

Section meetings in science, extension and institution economics will be appointed at hours not to conflict with general meetings.

A detailed program of the meetings of the Association will be printed in a future number of the Bulletin of the American Home Economics Association.

All persons who are planning to attend these meetings are asked to write to the President of the Association, Miss Martha Van Rensselaer, Cornell University, Ithaca, New York, Chairman of the Program Committee; or to Dr. Benjamin Andrews, Teachers College,

Columbia University, New York City, who is in charge of general arrangements of travel. The chairman of the local committee at Seattle is Miss Effie Raitt, University of Washington, Seattle, Washington; the chairman at Oakland is Miss Ellen Bartlett, Public Schools, San Francisco, California.

Institution Economics Section. The Institution Section of the American Home Economics Association will meet at the Lake Placid Club, Essex County, New York, June 25 to 29, 1915.

The program as being prepared, promises to be of the greatest interest to dietitians, lunch room managers, college dormitory directors, and to all others interested in the management of institutions or in instruction relating to institution management.

The opening session will consist of an address of welcome by the Chairman, Miss Sarah Louise Arnold of Simmons College. This will be followed by reports of the special committees who have been at work during the year, and will include reports on laundry, school lunches, waste, food sanitation, college dormitory management, etc. At this opening session members will also report upon special features of their work during the past year.

The subject of one session will be Cost of Foods from Prison to Palace Hotel.

One session will be devoted to Standard Per Capita Costs, with reports by Mr. Melvil Dewey, President of the Lake Placid Club; Prof. William Morse Cole, Harvard University; and Mr. Donald English, Cornell University.

The important problem of Housing of Women in Large Cities will be discussed; other subjects will include Cafeteria Management, under the direction of Miss Anna Hunn, Cornell University; Courses of Instruction in Institution Economics, under the leadership of Miss Sarah Louise Arnold; Dietitians, with Miss Flora Rose of Cornell University as Chairman.

For matters relating to rooms, address "Conference," Lake Placid Club, Essex County, New York. For programs or any other information regarding the conference, address the Secretary, Miss Emma H. Gunther, Teachers College, New York City.

HOUSEKEEPERS' DEPARTMENT

THE HOME CANNING OF MEATS AND VEGETABLES

GRACE DIETZ

Firth, Nebraska

The general experience has been that meats and many vegetables like corn, squash or pumpkin cannot successfully be canned in the home without some outfit which will secure the higher temperatures required to sterilize these products. Owing to their dry nature and compact structure heat does not penetrate vegetables and meat as readily as fruits. Many homes located at some distance from markets find it difficult or expensive to have on hand at all times a supply of fresh meat during the summer season. With a satisfactory method for the home canning of meats, however, a supply sufficient for the entire family during the summer may be packed during the winter months.

The author and her sister have had considerable experience in canning both meats and vegetables. Using the outfit described below, which is only one of several types found on the market, they have not only canned meats and vegetables for their own use for several years, but have put up these products for the market and have also been paid to do this work for neighbors and friends who did not possess an outfit of their own. Others have followed suit and have found that this work offers a good chance to earn "pin money." The report of a Canning Club of which the author is secretary showed that during the year 1914 the members, including both farmers and some town gardeners, canned 121,500 quarts of meats and vegetables in glass jars for home use. Many members also put up a good many cans for the market in addition to their usual work.

The secret for the successful canning of meats and vegetables is to subject the contents of the jars or cans to a sufficiently high temperature and for a long enough period of time for the heat to penetrate and sterilize them, and then to seal the jars so that they will be air tight. No chemicals, secret mixtures or complicated recipes are necessary. There is no necessity whatever for the use of any

of the preserving powders on the market if the contents of the jars are properly sterilized.

Nine years' experience together with a careful study of equipment and methods have convinced the author that the use of steam under pressure to sterilize the contents of the cans or jars is much more satisfactory than the use of other methods employing outfits of the "open boiler," "water seal," or "steam jacketed" types. The principal advantages of this method are as follows. It secures sterilization without the use of preservatives, and all vegetables and meats can be sterilized in from 30 minutes to one hour. With it it is possible to obtain easily the higher temperatures 240°-250° F. which are necessary for the sterilization of some vegetables and meats, whereas in an open boiler it is impossible to secure a temperature higher than the boiling point of water, 212° F. The shorter time required by the steam pressure method results in a great saving of fuel over the amount used in sterilizing for several hours or on three successive days as is necessary with the open boiler method. Experience has also shown that when other methods were used the losses of labor and material from spoilage due to insufficient sterilization and also the breakage of jars was considerable, but this was practically eliminated when the steam pressure method was used. The experience of a number of others engaged in home canning has been similar to that of the author.

The outfit may be easily carried from place to place and can be set up in a shed, on a porch, or under a tree as desired. It consists of a boiler or retort 12 inches by 18 inches in size made of boiler plate which is provided with a cast iron cover, fastened on with eye bolts and thumb screws and fitted with a steam gasket to make it tight. In this retort the jars or cans are placed, and the steam is generated. The retort also is fitted with a steam gauge, which indicates the pressure per square inch and the temperature in the retort, as well as a safety valve which may be set so as to hold the pressure at any desired degree and which also prevents danger from explosion. It is possible to secure with this boiler a pressure of 30 pounds per square inch which corresponds to a temperature of about 274° F. An outfit of this size, which will hold 14 quart or 22 pint jars, is most generally satisfactory for farm or home use, and may be purchased for about \$15. Larger sizes suitable for hotel or factory use may be purchased if desired. The boiler may be heated by setting it on the kitchen

range or other stove. No special heater is necessary although wood or gas burning heaters are manufactured especially for heating the boiler and may be purchased if desired.

Other necessary equipment for home canning is a reliable clock for timing the period of sterilization; accurate scales for weighing materials used in canning; an abundant supply of clean water, both hot and cold; and plenty of pans, pails, and cutting and paring knives. It is absolutely essential that everything used shall be scrupulously clean. All raw materials used for canning must of course be in good condition and perfectly wholesome when packed in the jars or cans, for no amount of processing will improve the flavor or condition of tainted meat. Meat which is strictly fresh when packed will have a rich and wholesome flavor. Glass jars are recommended for the packing of both meats and vegetables and only the best quality of rubber rings should be used, as inferior grades give trouble through leakage of air which spoils the product.

The following recipe will serve to illustrate the method employed in canning meats, although it is only one of the many used.

Recipe for canned roast beef. Cut hind or front quarters into pieces weighing 3 to 4 pounds, rejecting flank parts. Place in roasting pans, season to taste, add water and cook in hot oven for 25 minutes, then turn the meat and cook 25 minutes more. Remove meat from oven and slice at once or when cold as desired. When only partly cooked as this meat is, it packs better than if thoroughly cooked. Put into the jars, $\frac{1}{4}$ to $\frac{1}{2}$ cup of broth (made by boiling bones, flank, etc.) and pack the jars solidly with the sliced meat. It is much easier to put the broth in first. Place the rubber bands on the jars, put on screw caps loosely (or fasten only one spring if using spring top jars) and put jars in the retort. Fill the retort to a depth of $2\frac{1}{2}$ inches with water, fasten the cover of the retort tightly, set the weight of the safety valve at 15 pounds pressure and place retort on the stove. When the heat rises so that the steam gauge registers 15 pounds pressure or the thermometer registers 240° F. begin to count the time. Cook quart jars 50 minutes and pint jars 40 minutes. At the end of this time remove the retort from the stove and let the pressure go down slowly without raising the safety valve or opening the pet cock. If the pressure is released suddenly the contents will be forced out of the jars. After the pressure has gone down open the retort and finish sealing the jars.

The above method offers a means of extending the field of home canning to include all kinds of meats and vegetables and this would naturally lead to a wider use of these wholesome products which have heretofore been difficult to prepare at home. In addition to being used for canning meats and vegetables, this method is equally well suited to the canning of fruits.

A COMPARISON OF HOME AND COMMERCIALY CANNED GOODS

Those who read the article in the June (1914) JOURNAL, by Miss Grace Stevens on Home Canning may be interested in some of her figures given below.

<i>Product</i>	COMPARISON OF COST	
	<i>Home canned</i>	<i>Best commercially canned</i>
Grape juice, $\frac{1}{2}$ pt.	\$0.077	\$0.25
Peaches, 1 qt.	0.20	0.35
Beans (string), 1 qt.	0.14	0.25
Jelly, 1 glass.	0.05	0.10

Anyone who has compared the home and commercially canned grape juice knows the superiority of the former; peaches, beans, etc., from the two sources do not differ greatly in quality, only in price.

The following bulletins on home canning may be had free: Preservation of Food in the Home, Miss Louise Stanley and Miss May McDonald, University of Missouri, Columbia, Mo.; and Farmers Bulletins 521, 203 and 359, United States Department of Agriculture, Washington, D. C.

A NEW METHOD OF CANNING

LULA MACDERMOTT PRICE

Parkersburg, W. Va.

I am anxious to have my method of canning tried out as it is such a saving of time over the hot stoves. I tried it at first on a small scale last year. I canned peaches, red raspberries, black raspberries, cherries, blackberries, and pears. I have not lost a can. The color and flavor are very fine and the fruit firm and solid.

My first step is to put the jars (glass top jars preferred) on to sterilize; while my jars are sterilizing, I prepare my fruit, and make

a syrup of 1 part sugar to 2 of water, or not quite such a heavy syrup according to what the fruit may require, and I boil the syrup thoroughly. Put the raw fruit in the jars, pour over this the hot syrup, filling the can *full*, put on the rubbers and screw tight. Set these jars down in a tub or wash boiler, and pour in boiling water up to the top of the cans. This is often done on the back porch. I cover the tub or boiler and throw over it a rug or blanket and let stand over night; take out the jars the next morning, wipe off and put away.

HOUSEKEEPERS' REFERENCE CIRCLE

ALICE E. WHITAKER

Four years ago the members of the Housekeepers' Alliance of Washington, D. C., came to the conclusion that the written reference has practically no value as given to the domestic worker when leaving a place. The employer as a rule, has not the moral courage to refuse a reference that will carry some weight in securing a new position even when the facts do not warrant a good word. To promote an interchange of information among members of the Alliance a reference circle and registry of workers was established and has continued to the present time. No fees are paid and the use of the registry is limited strictly to members.

Brief records are kept on cards for ready reference giving name, address, kind of work, price per hour, day or month, qualifications and any special deficiencies together with name and address of one or more Alliance members who recommend the worker and who are ready to give more particulars if needed.

Regarding those who go into the homes as permanent workers yet more definite information is given. This record includes such points as name, address, nationality, approximate age, single or married, personal appearance, church affiliations, disposition, reliability, kind of work and efficiency, punctuality, lost time and the wages expected, whether room is furnished at employer's home, how long employed at the last place and reason for leaving. This record is dated and signed by the housewife who gives also the size of her family. This paper is filed for consultation if need be but is never shown to the employe concerned nor to the merely curious; hence the questions are answered fully and honestly by the housewives.

The list at present includes general houseworkers, companions, nurses for adults and for children, house and window cleaners, laundresses, cooks, men and women waiters, care takers, mother's helpers, milliners, ladies tailors, carpenters, painters, packers and movers, house men and maids, men for outdoor and indoor repairs, for care of grounds, furniture repairs, furnace men, electricians, seamstresses, and entertainers.

To secure a worker the secretary, called by telephone, gives one or more names of those most fitted for the demand, together with the card record. Then by telephone, postal, or personal visit the housewife completes the transaction. She is expected to report success or failure to secure the worker in order to keep the registry up to date.

The larger amount of placing is among what is called auxiliary workers who go by the hour or day or parts of every day in the week. The demand for help in general housework is often more than can be met. No man or woman is ever given a written reference or card to carry to a place.

Many workers have been on the list during the four years and have come to be valued highly, especially for emergency work. Altogether the plan may be called successful and has led to a better understanding of some of the relations of employer and worker.

FOOD VALUE OF MILK

Milk is an invaluable food and also cheap at 12 cents a quart. But apparently because it is liquid and not solid, people in general do not give it this value.

The following taken from an article by Caroline L. Hunt in the *Philadelphia North American* gives a meatless dietary:

A half-pound of bread, $2\frac{1}{2}$ ounces of butter, 3 pints (about 52 ounces) of milk, $\frac{1}{2}$ pound of vegetables and 1 pound of fruit make a generous daily allowance for a woman, and furnish three ounces of protein or tissue-forming material and a fuel value of about 2800 calories. Note that we are not recommending this allowance nor this list of goods; we are simply saying that there is no difficulty about getting a balanced ration from these foods nor about taking them in quantities large enough to satisfy the advocates of a liberal diet.

Take the allowance of food we have mentioned and cut it down all

along the line, take off a little bread and butter, a little milk and cut down the allowance of fruit and vegetables somewhat and you still have a balanced ration, but one which comes nearer satisfying those authorities on food who think we all eat too much. But leave out the milk, and we take away at one fell swoop more than half the material that goes to the repair of our bodily machinery.

But someone says: "Granted that the food value of these materials is all right, could they be so combined as to make attractive meals?" That depends upon whether a person likes these particular foods or not. To those who do, it would not be much of a hardship to breakfast off of 2 glasses of milk, 3 slices of toast (about 2 ounces) with butter, an orange (5 or 6 ounces net) and a fig or two. For dinner a mealy baked potato (4 ounces), a generous dish of peas (4 ounces net), a slice of bread (1 ounce), a glass of milk and a baked apple would not be so bad. For supper bread and milk and dates would go very well and a country appetite could easily dispose of a pint and a half of milk, 3 slices of bread and a half dozen dates. Or for those who do not care to take so much milk as a beverage, at least a cupful could be made into a soup and another one or two could be used in the form of scalloped potatoes (the kind in which a small amount of thinly sliced raw potatoes is cooked in a large amount of milk) or milk gravy or junket or in any number of other ways.

It is dangerous to make dietaries for other people. We have only been trying to show that milk figures up very rapidly even in the dietary of a grown person. It insists on being taken into account and not treated as a supernumerary.

ICED TEA

SUSANNAH USHER

All kinds of teas are not equally suitable for making iced tea. Some teas, especially the heavy-bodied India varieties, make infusions that turn turbid on cooling. This turbidity may be so prominent that one might think skimmed milk had been added.

An interesting experiment may be made by brewing small amounts of several teas, as, English Breakfast, India (Orange Pekoe, Assam, or Darjeeling), Ceylon, and Formosa Oolong, then chilling and noting those that remain clear.

When iced tea is served to large numbers of people, it is often made several hours in advance, cooled, and then iced as needed. Under these conditions this tendency to turbidity is especially troublesome, as it has time to show itself to its full extent.

The heavy-bodied teas may not make attractive and sparkling iced beverages but they are delicious served hot with cream.

Do not expect one and the same tea to be equally palatable and attractive served hot or cold, with cream or with lemon.

CLEANING ALUMINUM WARE

MINNA C. DENTON

Ohio State University

1. "*Boiling out*" with water. This does, of course, help soften adhering masses of burnt food material; but hot water itself causes a darkening of aluminum, which in my experience (Lake Michigan water used) shows plainly on heating clean water in a clean vessel even before the boiling point is reached. This blackening or "tarnish" is very troublesome to remove. Any coating which perceptibly roughens the aluminum surface will make it difficult to keep clean, and is therefore insanitary. (To remove the tarnish observe No. 4. below.)

2. *Boiling with soap or alkaline detergents.* The action of alkali (e.g., sodium, ammonium, and potassium compounds) will ruin the vessel in time. Such neutral soap as Ivory may be used if there is grease to be removed, but aluminum vessels should be kept out of the usual soapy dishwater.

3. *Rubbing with metal polishes.* It is impossible to make a statement which would cover all kinds of metal polishes. I notice that aluminum manufacturers recommend the use of some of them, and I have found them satisfactory, although the labor involved when rubbing is done with cloth, chamois, or sponge, as directions usually indicate, is very tedious.

4. *Cleaning by use of abrasive materials.* I have found the use of steel wool No. 0 the quickest and most efficient means of removing the black tarnish which soon makes aluminum so unsightly. It does make fine scratches, which show with close inspection particularly upon a shiny surface (e.g., outside of a vessel), much less upon a harder dull finish (inside of same vessel). But so does the finest silver polish

make very similar scratches, as can easily be demonstrated with a lens. The housewife will not find it difficult to decide whether she considers these objectionable.

The steel wool may be bought occasionally in house furnishing stores, put up in small packages but the best place to buy it is at a hardware store or perhaps at a paint store, where I have found it at 50 to 60 cents a pound. If your dealer does not carry this finest grade, he will usually order it.

This steel wool, either No. 0 or coarser grades, by the way, is exceedingly efficient in scouring iron (frying pan, oven floor, garbage pail, etc.). It must not, however, be used upon a vitreous enamel ware.

Another abrasive cleaner has a twine mesh basis, its threads being wrapped with fine copper bands. It has appeared rather recently in household furnishing stores, being originally an importation from Germany, and sold at first under the name "Heckel's pot cleaner." It is amazingly efficient in removing adherent crusts of food material from almost any sort of cooking vessel, but does not take the black tarnish from aluminum; and if used with too much force in the effort to make it do so, may scratch the aluminum badly. It does not seem to do as much harm to enamel ware as does the finer steel wool—does not "take hold" of it so intimately.

Still other examples of gritty or abrasive materials sometimes recommended for aluminum are emery paper 00, and bath brick; they may be used on a hard finished surface if not on a softer one, but to my thinking, the steel wool, used alone or in combination with a soap or metal polish, is preferable to them all.

5. *Cleaning with acids.* It has been noted that when a highly acid food, as rhubarb, is cooked in an aluminum kettle, any dark coating vanishes, as if by magic. Authorities¹ differ as to the harmfulness of the small amount of water-soluble aluminum salts that would thus be taken in the food. Extreme caution would suggest that such foods be cooked in porcelain lined kettles.

The action of acid fruits suggests their use and the use of other acids as cleaning agents, but experiments show that the harmless commercial acids would be very expensive when used in quantities sufficient for satisfactory results.

¹ For the results of Dr. Glaister's experiments see page 304.

PROTECTION FROM THE CLOTHES MOTH

Where the cost of cold storage is not an item to be seriously considered, the adoption of this method for protection of goods during the hot months is strongly recommended.

Recent experiments made at the instance of Dr. L. O. Howard of the U. S. Bureau of Entomology have shown that the larvae of the clothes moth can be killed by an alternation of a low temperature with a comparatively high one, and this procedure should be adopted by cold storage companies.

A merchant who stores furs at ordinary temperature has found the following method successful:

"Furs when received are first most thoroughly and vigorously beaten with small sticks, to dislodge all loosened hair and larvae or moths. They are then gone over carefully with a steel comb and packed away in large boxes lined with heavy tar roofing paper, or in closets similarly lined with this paper."

For the home keeping of woolens and furs the work must be started in the first warm days; careful beating, airing and brushing is of first importance; only in this way can the possible eggs and larvae be dislodged. If packed away with the garment they are sure to develop, no matter to what extent camphor, tobacco or naphthaline balls have been used. These repellants are only disagreeable to the parent moths who are less likely to deposit their eggs where the odor is strong.

When clean, the garments should be sealed in well made bags of linen or paper or in pasteboard boxes whose openings are pasted over with strips of paper.

ECONOMY OF DOUBLE WINDOWS

When new or old houses are being screened for the summer in the latest approved style which fastens a wire screen on the outside over the entire window space, owners would do well to obtain at the same time estimates for double windows on at least the most exposed side of the house—windows that shall screw into the same grooves and replace the screens when they are removed.

There seems to be no doubt that the initial cost of these windows is soon paid by the saving of coal, and that they insure an even temper-

ature in the house, while there need be no lack of fresh air if one window in each room is fitted with the best form of ventilator.

The report from one house is that with double windows an equable temperature of 70° was maintained with the same amount of coal formerly necessary for 60°. The cost of putting double windows on all first story windows it was calculated would be paid for in five winters by the saving in coal.

THE FOLDING GO-CART

Mrs. Max West, author of a bulletin sent out by the Children's Bureau, brings out the limitations of this convenient and popular baby carriage.

Mrs. West recognizes the advantages of the folding go-cart, which can be taken on the street car when getting baby from place to place. But she finds it extremely bad for baby when he is left in it for any length of time. It is too small and cramped, does not allow for proper wrappings, she thinks, and keeps baby so close to the ground that he gets nothing but the lower and colder air currents, which are much more likely to be laden with street dust and germs.

The proper carriage for general use should be two feet high, should have room for the baby in any position with his proper wrappings, should have strong, well balanced springs, should rest squarely on four wheels, and should have an adjustable cover. Moreover, it is better to let the baby take his airing quietly in one place than to move him around too much.

DANGER IN USING LEFT OVERS

An experience of last summer when the thermometer stood in the nineties may point a moral for the coming hot term. What was left of a dish of stewed celery with cream sauce was placed overnight in the refrigerator and reheated for the luncheon next day. The one member of the family who ate of it reported afterward that it tasted "a little queer." Four hours later he was taken violently ill with all of the symptoms, according to the physician, of "ptomaine poisoning" (though it is more correct to call it bacterial poisoning, since it is due to bacteria sometimes present which grow rapidly and are not all killed unless cooking is very thorough), and did not fully recover for three days. As this reheated celery was the only dish of which he alone had eaten, and no one else in the house was ill, it

was suggested that ptomaines had developed in the cream sauce over night, as there was some uncertainty as to how long it had stood in a hot kitchen before it went into the refrigerator, whose temperature was also unknown.

This experience would indicate that in hot weather we should plan to have few "left overs" and should be sure that foods which are to be used again are placed at once in a well-iced refrigerator. Special care must be given to foods of a high protein content, as milk, meat, peas and beans. Remember that pasteurization of milk has not yet become so perfect in all of our cities as to place it above suspicion when the thermometer is in the nineties.

THE HEALTH OF OUR SUMMER RESORTS

Vacation typhoid is becoming known as a serious hazard. The prudent recreation seeker now finds out in advance whether or not this infection prevails at the place he has in mind, and furthermore learns what sanitary measures are being taken there to safeguard the health of the summer colony. The town of York, Maine, has recently taken steps that at once place it in the forefront of progress as far as health is concerned. The way the problem was met may well serve as a model for other summer resorts. Last year there were a number of cases of typhoid fever at York. No attempt was made to conceal the fact of the existence of the disease and its extent. The authorities very properly felt that the way to meet any danger was to face it in the open. An expert was invited to come to York and make a sanitary survey. The chief recommendation of the expert was that York needed a full time health officer. The town appropriated \$2500 a year for this purpose and is now spending one dollar per capita per year for health, a larger sum than is appropriated by any other American city directly for a like purpose. "Public health is purchasable," the price is moderate, and York shows by its action that it intends to enjoy the best attainable protection from disease. Other summer colonies will find it to their advantage to follow the example of York, and take the necessary measures to safeguard their citizens and the strangers within their gates. *The Journal of the American Medical Association* strongly advises the public to demand the security of health that only a well-ordered sanitary department can furnish. Our sea-shore and mountain resorts can no longer depend on nature and luck for a clean bill of health.

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Milk—Its Milk Sugar, Conductivity and Depression of Freezing Point. [Fresh and Cooked Milk.] Lillias C. Jackson and A. C. H. Rothera, *Biochem. Jour.*, 8 (1914), no. 1, pp. 1-27.

Food Value of Milk and its Products. R. Harcourt, *Ontario Dept. Agr. Bul.* 221 (1914), pp. 20. (Recipes are given for cheese dishes and also data regarding their relative cost as sources of protein and energy in comparison with meat dishes.)

Electric Cooking on the Battleship "Texas." *Electrical World*, 63 (1914), no. 20, pp. 1099, 1100, figs. 3. (Menus are given showing the food prepared for one week.)

Electric Cooking. *Austral. Mining Standard*, 50 (1913), no. 1291, p. 116.

HYGIENE AND SANITATION

The Effects of Nitrogen Peroxid on the Constituents of Flour in Relation to the Commercial Practice of Bleaching Flour with that Reagent. B. Moore and J. T. Wilson, *Jour. Hyg. [Cambridge]*, 13 (1914), no. 4, pp. 438-466.

Unsterilized Vessels in Restaurants. *Brit. Food Jour.*, 16 (1914), no. 181, pp. 3, 4.

What Attitude Toward the Supervision of Sanitary Conditions in Restaurants, Hotels, etc. C. D. Woods, *Proc. Assoc. Amer. Dairy, Food and Drug Officials*, 17 (1913), pp. 85-90.

Enameled Utensils Used in the Preparation of Food. F. Bordas, *Ann. Falsif.*, 7 (1914), no. 63, pp. 49, 50; abs. *Expt. Sta. Rec.* 31 (1914), no. 3, p. 260. (This article calls attention to the possible danger in the use of enameled ware in which meat is chopped, in that small particles of the enamel may become detached and thus find their way with the food into the digestive tract, causing damage to its walls.)

The Neutralizing Power of Saliva in Its Relation to Dental Caries. J. A. Marshall, *Amer. Jour. Physiol.*, 36 (1915), no. 3, pp. 260-279.

Bacteriologic Standards for Drinking Water. Editorial, *Jour. Amer. Med. Assn.*, 63 (1914), no. 26, p. 2294; *Pub. Health Rpt. [U. S.]*, 29 (1914), no. 45, pp. 2959-2966.

Ice Cream Studies in Cincinnati. C. Bahlman, *Amer. Jour. Pub. Health*, 4 (1914), no. 11, pp. 1009-1015.

The Future of the Milk Industry. F. E. Fronczak, *Amer. Jour. Pub. Health*, 4 (1914), no. 11, pp. 1021-1025.

Second Report of the Committee on Cold Storage. *Amer. Jour. Pub. Health*, 4 (1914), no. 11, pp. 1101-1106.

An Epoch-Making Law. N. Y. Milk Legislation as a Model for National Food Standards. M. I. MacDonald, *Forecast*, 9 (1915), no. 1, pp. 13-20.

Résumé of Work on Tuberculosis in Children for 1914. May Michael, *Amer. Jour. Diseases Children*, 9 (1915), no. 2, pp. 135-181.

How War Has Been Waged in Mexico Against the Mosquito. E. Liceaga, *Amer. Jour. Trop. Diseases and Prev. Med.*, 2 (1914), no. 2, pp. 117-123.

Observations upon the Bacteria Found in Milk Heated to Various Temperatures. W. W. Ford and J. C. Pryor, *Bul. Johns Hopkins Hosp.*, 25 (1914), no. 283, pp. 270-276.

BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS if the Journal price is listed.

The General Education Board. An account of its activities, 1902-1914.
New York: General Education Board, 1915, pp. 240, ill. 32, maps, 31.

Home Economics teachers who are thinking in terms of the wider state-manship of their field will wish to see this fascinating story of wealth devoted to welfare, particularly as some of its enterprises, the southern farm demonstrations and canning clubs have been directly related to home betterment. This work has aimed at raising the financial status of the farmer, improving his home and farm buildings, and awakening a vital agricultural interest among the children. Cotton, corn, and grass crops have been greatly increased, and resulting financial profit to the community has enabled the farmers to support a comprehensive school system, and in general there has been an almost incredible growth of vigorous social and civic interest. The bringing into the home of a profitable industry like canning is not only a source of financial profit, but it stimulates better living. The General Education Board has aided in the establishment of well-equipped secondary schools in rural districts; has assisted higher institutions of learning which promise to reach the largest number of individuals, and recently has turned its attention to improving medical schools. The policy throughout has been one of coöperation with the district or institution—and in no case of dictation or interference.

Social and Labor Needs of Farm Women. U. S. Dept. Agr. Rpt. 103 (1915), pp. 100.

Domestic Needs of Farm Women. U. S. Dept. Agr. Rpt. 104 (1915), pp. 100.

Educational Needs of Farm Women. U. S. Dept. Agr. Rpt. 105 (1915), pp. 88.

Economic Needs of Farm Women. U. S. Dept. Agr. Rpt. 106 (1915), pp. 100.

These valuable documents, which were edited by G. W. Wharton, Chief, Office of Information, are based upon extracts from letters received from farm women in response to an inquiry "How the Department of Agriculture can better meet the needs of Farm Housewives," with special

reference to the provision of instruction and practical demonstrations in Home Economics under the Act of May 8, 1914, providing for Coöperative Agricultural Extension Work, etc. The National Government, particularly through the Nutrition Investigations and other activities of the Department of Agriculture which touch the home, has already contributed a great deal of valuable material of use in solving the various problems of farm women. This is shown by the references to such work made very largely in the form of foot notes. Of great value to the teacher and student are the appendixes to the bulletins which contain fuller descriptions of Government activities with lists of Department of Agriculture publications of interest to Farm Women for gratuitous distribution, and other Government documents.

The Home Garden in the South. U. S. Dept. of Agr., *Farmers' Bulletin* 647 (1915), pp. 28.

In this bulletin the fact is brought out that a garden of $\frac{1}{4}$ to $\frac{1}{2}$ acre is sufficient for an average family and should produce enough vegetables for use throughout the entire year.

Sweet Potatoes: Culture, Storing and Studies in Fertilizing. By H. P. STUCKEY. *Georgia Sta. Bul.* 107 (1914), pp. 30, figs. 24.

Storage houses are discussed, also questions which have to do with more particular sweet potato culture, and the relation of fertilizer to flavor and texture of sweet potatoes and to their size and smoothness.

Crop Production: An Agricultural Text for High Schools. By CLARENCE M. WEED AND WILLIAM E. RILEY. New York: D. C. Heath and Company, 1914, pp 252, ill. \$0.75. By mail of the JOURNAL, \$0.85.

In following the plan of this book, crop production would be taught by allowing the pupil to experiment and observe for himself. The seeds are planted and as the plant grows the pupil learns its structure, its enemies, diseases, etc. Additional instruction is give afterward. The study is divided into vegetable crops, flower crops, fruit crops, and farm crops.

Canning, Preserving and Pickling. By MARION H. NEIL. Philadelphia: David McKay, 1914. pp. 284, figs. 12. \$1. By mail of the Journal, \$1.08.

The book is largely made up of recipes, under the headings—Canning Fruits and Vegetables; Jellies, Jams and Preserves; Pickling; Chutneys, Catsup and Relishes; Beverages, Vinegars and Syrups. Preceding each set of recipes there are general instructions in regard to utensils, methods, and selection of fruits, vegetables, etc.

Preserving and Canning. By EMILY RIESENBERG. Chicago and New York: Rand, McNally and Company, 1914, pp. 104. \$0.50. By mail of the Journal, \$0.60.

Directions are given for the canning of fruits and vegetables, together with recipes for the preparation of jams, preserves, jellies, marmalades, pickles, and beverages.

Food Industries. By H. T. VULTÉ AND S. B. VANDERBILT. Easton: The Chemical Publishing Company, 1914, pp. viii + 309. \$1.75 postpaid.

This volume embodies the valuable experience of its authors for a period of years. Dr. Vulté's work as a practical chemist outside the teaching laboratory has given him a first hand knowledge of manufacturing processes that makes his statements authoritative. The facts in Food Industries are well attested, and true to the case. Miss Vanderbilt has been a co-worker with Dr. Vulté for many years, and her thorough and practical habits of teaching are evidenced in this book.

The various manufacturing processes are well and clearly described, and the style is simple and interesting. The chemical background is made clear, and the whole subject is treated in a broad and effective way.

It must prove valuable as a text, or reference book in the normal school and college, and all elementary and high school teachers may find in it reliable material for their pupils.

The volume is attractive in appearance with excellent type, and many good and unusual illustrations.

Food Products. By H. C. Sherman. New York: The Macmillan Company, 1914, pp. ix + 594, figs. 36. \$2.25. By mail of the Journal, \$2.40. For an extended account of this volume, see page 287.

Your Child Today and Tomorrow. By SIDONIE MATZNER GRUENBERG. Philadelphia: J. B. Lippincott Company, 1913, pp. 234. \$1.25. By mail of the Journal, \$1.35.

The sub-title of this book explains its general scope: "Some problems for parents concerning punishment, lies, fear, imagination, obedience, will, reasoning, ideals, and ambitions, work and play, social activities, adolescence, heredity." It is a type of book of which it is high time, there were more, dealing as it does with the intellectual and moral development of the child. In the preface, the author mentions her debt to her opportunities for work in the Federation for Child Study under the guidance of Prof. Felix Adler, leader of the Ethical Culture Society of New York, and an introductory chapter is contributed by Bishop Vincent of the Methodist Church and founder of Chautauqua. The book is this year one of the

volumes of required reading in the Chautauqua Reading Course. Bishop Vincents' characterization of it is just as "an exceptionally sane, practical, and valuable treatment of the problem of problems suggested by our present American civilization, namely, the training of the on-coming generation."

Home Economics workers must recognize the importance of the home training of the child.

Physical and Chemical Tests for the Housewife. By SADIE B. VANDERBILT. *Teachers Col. [N. Y.] Bul.*, 4 ser., No. 16 (1913), pp. 16.

A number of tests are described which deal with gas and liquid fuels, water, food materials, food adulteration, soap, and soap powders.

Selected List of Municipal and Civic Books. 2 ed. New York: The American City Bureau, 95 Nassau St. Pp. 66. Free.

Students of Home Economics who are awake to the municipal relations of the household will do well to secure this list of publications.

RECENT BOOKS

The publishers' prices are quoted.

Cooking Book. By L. P. Frich and I. M. Robinson. Muncie (Ind.): Normal Institute, 1914, pp. 198. \$1.

Principles of Food Preparation. By M. D. Chambers. Boston: Boston Cooking School Magazine Company, 1914, pp. 251. \$1.

Sick-room Cookery Simplified. By Mabel Baker. New York: The Macmillan Company, 1915, pp. 152. \$.60 net.

Small Family Cook Book. By M. D. Pretlow. New York: McBride, Nast and Company, 1915. \$.75 net.

Every Woman's Flower Garden. By Mary Hampden. New York: Duffield and Company, 1915. \$1.50.

Gardening Blue Book. By L. B. Holland. Garden City (N. Y.): Doubleday, Page and Company, 1915. \$3.50.

Joy in Gardens. By M. E. Brown. New York: Mrs. J. C. Brown, 36 East 37th St., 1914, pp. 308.

First Book of Physiology and Hygiene. By G. D. Cathcart. New York: The Macmillan Company, 1915, pp. 158. \$.50.

Physiology and Hygiene. By E. S. Chesser. New York: The Macmillan Company, 1915, pp. 231. \$.70 net.

Chemical Examination of Water, Sewage, Foods, and other Substances. By J. E. Purvis and T. R. Hodgson. New York: Putnam, 1914, pp. 228. \$2.75.

NEWS FROM THE FIELD

Annual Conference of State Leaders in County Agent and Boys and Girls Club Work. The annual conference of leaders in boys and girls project work of the Northern, Central, and Western states was held in Chicago, December 3 to 10. At this conference fundamental policies were framed which will be followed this year throughout the North and West.

The following projects were recommended and accepted as projects to be emphasized:

Corn, Potato, Sugar Beet, Home Garden, Alfalfa, and Market Garden Clubs. In Home Economics: Wheat and Bread, Canning, Canning and Marketing, Garden and Canning, Home Efficiency, Flower Garden Clubs. In Stock Work: Cow Testing, Baby Beef, Poultry, and Pig and Crop Production Clubs. For a special club project, to create interest during the winter months, the Farm and Home Handicraft Clubs were recommended.

The Committee on Policies submitted the following recommendations, which summarize the principles governing Junior Extension Work:

1. That the Boys and Girls Club Work is a back-to-the-home movement, and is the Junior Extension Service in Agriculture and Home Economics.
2. That we recommend that all club projects approved by this convention be supported by the Federal government through the United States Department of Agriculture, in every way possible.
3. It is also recommended that simplified report blanks for all approved club projects be furnished by the Federal Department of Agriculture to the states; such reports to cover items only required by the Federal office in annual state reports, and that a committee be appointed to work with the national leaders in charge of the work in making out such reports.
4. That we recommend the desirability of having a national and general basis of award on all approved club projects.
5. That we recommend the use of progressive educational trips as a reward for achievement in club projects.
6. That we recommend a uniform national progressive system of emblems for award, and that the 4-H brand idea be used in standardizing all club products and projects.
7. That all forms, circulars, and literature to be mailed out under the Government frank in the general conduct of Boys and Girls Club Work

be first submitted to the Federal office of the United States Department of Agriculture.

8. That we favor a uniform system of instruction, the same to be observed whenever applicable.

9. Believing that there are many boys and girls in the city destined for country life, we recommend that an effort be made to give the city boys and girls equal opportunities with those of the open country in the Junior Extension or Club Work in Agriculture and Home Economics activities.

10. The committee feel that county or district leadership in club work is very important and that such an organization should be promoted wherever possible, all leaders to be under the direction of the State Agent in Charge of Boys and Girls Club Work.

11. We favor close coöperation in Boys and Girls Club Work with the public schools, through the State Department of Public Instruction.

12. Since the club work is closely related in its administration to the work of the public schools we recommend that all state agents in charge of club work attend the meetings of the state and national teachers' associations for the purpose of presenting the plans and policies of the Junior Extension Work.

13. We favor the plan of holding local, county, district, and state schools of instruction for club members, as well as for those engaged as club leaders.

Canning Clubs. Daughters of southern farmers, who have been members of the United States Department of Agriculture's garden and canning clubs have been able to give their fathers practical demonstrations of the value of crop diversification during the present bad cotton year. The actual products which the girls have put up are proving an invaluable asset in many farm homes where the cotton crop has not brought the customary returns and many farmers are now substituting whole acres of onions and tomatoes in place of cotton after seeing the success which the young women have made with these crops.

The Girls' Demonstration Work began with the Canning Clubs in 1910 when four counties in two states were organized. The prospects are that in 1915 there will be an enrollment of 50,000 girls under the supervision of nearly 500 women agents in the 15 southern states alone. The enrollment for 1914 was 33,173. Of these club members 7793 put up 6,091,237 pounds of tomatoes and other vegetables from their tenth acre gardens. These products were put into 1,918,024 cans, jars and other containers. They are estimated to be worth \$284,880.81 and nearly \$200,000 of this is profit. The average profit per member was \$23.30. Furthermore, these girls put up thousands of dollars worth of other products from the farms and orchards.

Florida County Agents. The fourth annual meeting of the County Agents of Girls Canning Clubs of Florida was held in Tallahassee, February 16-20. The lectures and discussions were along practical lines and resulted in giving the agents a knowledge of what was being done by other agents, suggestions as to the future needs of the clubs, instruction in demonstrations, and plans for introducing new and improved methods into the farm homes.

Among the speakers were county agents, members of the State College faculty, the secretary of the American Home Economics Association, and representatives from four divisions of the Department of Agriculture, Washington.

Extension Work. A conference and school of housekeepers was held by the Extension Division and Home Economics Department of the University of Washington, Seattle, February 8 to 12.

The speakers were experts in every line of homemaking from the planning of the housework and the spending of the income to the care of the baby and the method of running a well-ordered home.

The right combinations of food, menu making, and the way the income can be spent to the best advantage were special features of the discussions. There were demonstrations of children's clothing, sensible kitchen aprons, practical table and bed linen, new recipes for breakfast, luncheon and dinner, invalid cookery, and use of leftovers.

Another feature was the furnishing of a room in good taste at very moderate cost; a rug, curtains, wall paper and furniture were shown; also good and bad taste in kitchen ware, china, dishes, silver, glassware and linen were illustrated.

One session was devoted to ten minute talks about the greatest problems we have in housekeeping today.

Parent-teachers' associations, mothers' clubs, women's clubs, etc. were represented. The state superintendent of public instruction met the housekeepers, and a physician, trained nurse, household decorator, gardener, pure food inspector, bakery inspector and others told of their work.

States Relations Service. A new appropriation act gives the Secretary of Agriculture authority to reorganize the Department of Agriculture according to the recommendations in his recent annual report. The change that will be of most interest to our readers concerns the Office of Experiment Stations. To quote from the *Weekly News Letter*:

"The newly established States Relations Service will include the present Office of Experiment Stations (except the Irrigation and Drainage Investigations, transferred to the Office of Public Roads and Rural Engineering)

and the Farmers' Demonstration Work throughout the United States, heretofore conducted under the Bureau of Plant Industry. The scope of the work now conducted under Nutrition Investigations is broadened to include investigations on and experiments with various materials used for clothing, and in decorating and equipping houses, as well as such matters as the removal of stains, laundering and other household activities, in addition to the experiments with the respiration calorimeter and the more practical work in home dietetics.

"The popular bulletins commonly known as 'Uncle Sam's Cook Books' will be supplemented by others covering a wider range of home topics. It is also expected that these investigations will contribute in a large way to the development of extension work in home economics as a part of the coöperative extension work carried on by the department and the state agricultural colleges. The office conducting the investigations will hereafter have the more appropriate title of 'Office of Home Economics.' Investigations of the physiological effects of foods on the human organism have been transferred to the Bureau of Chemistry.

"The States Relations Service largely has to do with the control of the federal funds granted to the state experiment stations and has supervision of the expenditure of the funds accruing to the agricultural colleges under the Smith-Lever Act."

Notice. The bulletin, "Education for the Home," published by the U. S. Bureau of Education indicates that twenty colleges and universities now offer the degree of Master of Arts or Master of Science in the field of Home Economics. We are informed by the Department of Home Economics at the University of North Dakota, that this university should not yet be included in that list.

Household Electricity. In connection with the formation of a Bureau of Home Economics, by The New York Edison Company, there will be a series of articles on electricity for household use in the *Edison Monthly*, the magazine issued by The Edison Company. These articles were begun in the April issue with the publication of a complete list of manufacturers of electric apparatus for the home.

Prize Contest. A prize of \$1000 is to be awarded to the author of the best original pamphlet on social hygiene for adolescents between the ages of twelve and sixteen. The contest closes July 31, 1915. For further information address The American Social Hygiene Association, 105 West 40th St., New York City.

THE Journal of Home Economics

For those interested in Homemaking, Institution Management,
and Educational Work in Home Economics

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HOUSE CONSTRUCTION IN CALIFORNIA

GEORGIE BOYNTON CHILD

Housekeeping Experiment Station, Stamford, Conn.

When the opportunity came to us last summer to visit California and to study, at first hand, the living conditions in this wonderful part of the country, we looked forward to our trip with unusual anticipation. We had heard so much about the progress of house construction in the far West, and of the original and resourceful methods developed, that we felt we could not carry out our own long cherished plans for building until we had seen the very best that California had to offer.

We made every effort before we started west, to find out the places in California which best represented these new ideas, in order to make the most of the limited time at our disposal. Everyone with whom we talked or to whom we wrote, said at once, "Pasadena and Los Angeles." And so we planned to make these towns the center for our special study. We visited other places just for recreation or to be with friends. The strange part of it was that the less frequented places seemed to us to be more representative of the real life and development of California than the more talked of centers, because the homes were the result of native resourcefulness and not the product of real estate schemes. We found in these places constructive ideas in house building that might well be applied anywhere. These ideas are all in the direction of more simplicity and independence in house-building, in making the building construction subservient to the needs of the homemaker.

Perhaps the most representative exponent of these ideas is Mr. Irving T. Gill, an architect who began to carry out his ideas first in San Diego and who is now located at Los Angeles. But it was not in Los Angeles or Pasadena that we heard of him, nor did all our inquiries in these centers discover his work as anything of especial interest.

The material Mr. Gill uses to carry out his ideas in house-building is concrete. The special type developed for either cottages or houses is straight-line, rectangular buildings, without ornamentation or broken building lines and is relieved by arches of the Mission type for porches. This architecture depends for its beauty upon its correct proportions and the spirit of simplicity and permanence that it gives. It is part of Mr. Gill's creed that one should strive for *utility* in construction, not beauty, but Mr. Gill's definition of *utility* includes not only fitness for the needs to be served, but a pleasing effect to the eye, so that it is really beautiful in the truest sense. One of the most beautiful houses that we saw during our stay in California, was a house of this type built for a wealthy woman in Los Angeles. It gave one the effect of an Easter lily in its dignity and stateliness of outline. The concrete was tinted a very delicate cream and the only touch of color was given by the warm, soft rose tint of the concrete entrance porch, which seemed to reflect a glow to the soft cream white of the house itself, just as a sunset touch softly lights up a bank of clouds. The only ornamentation was a beautifully designed door of mahogany, the upper part having delicate spindle work, and the lower part plain polished wood.

The idea that governs the exterior design of Mr. Gill's buildings is that they must fit harmoniously into the landscape. Casting aside traditional models, and aiming to develop only such a type of construction as would best meet the needs of homemaking, Mr. Gill has succeeded in showing that this is the way to secure what is really beautiful in outline. The three ideas which have influenced every structural phase of Mr. Gill's work, are simplicity, utility, and stability. As he works out the plans nothing is accepted that departs from these three essential requirements. This omits all useless ornamentation, either of exterior or interior. Everything must serve a purpose, but the purpose of a real home is to afford rest and inspiration, as well as to meet material needs. And so, to conform to utility, it must take into consideration the whole range of human needs. Purity of out-

line, correct proportions, joy in natural beauty, none of these must be sacrificed in planning any part of the home. The house is but to afford protection and shelter and thus enable one to enjoy the beauty of the surrounding country all the more, and is, therefore, so placed as to conserve the sunshine, to have its porches and windows open to the loveliest views that can be commanded or that can be created by skillful laying out of gardens. Its interior is planned so that no wall decorations shall detract from the beauty of pictures or other works of art, and no ornamentation of flooring shall mar the effect of beautiful rugs. The third requirement, stability, is secured both by the material chosen for construction, and by having all the interior finish simple, durable and permanent.

The building material chosen to carry out this new type of house construction, is concrete. The foundations and floors are solid concrete, the side walls and roof are hollow tile. The roofs are re-enforced with steel and covered with asbestos. The finish inside and out is cement plaster to which a moisture-proof preparation has been applied to prevent dampness of the walls in the rainy season. The favorite color for the buildings is pure white, because this seems best suited to the warm light of Southern California landscape, but where the houses are built in neighborhoods where dark stone or wood are used for the other houses, a delicate cream color is used instead of pure white plaster, in order to avoid any sense of glaring contrast.

We were fortunate in being able to see the cottages, which represented these ideas, carried out in the simplest form, showing that it is possible to build homes of moderate cost that conform to the highest ideals of honesty in construction and that meet every practical and aesthetic need. These cottages are grouped near the foot hills of Sierra Madre, just outside of Pasadena. From the beautiful little gardens in the rear of the cottages one can look off toward the mountains with their wonderful changing lights and shadows. A central pergola and community garden with rustic tables and chairs enable all the members of the cottage group to enjoy what is practically a beautifully laid out park. The little individual gardens that are a part of each cottage yard satisfy a desire for a garden of one's own.

Each cottage has a loggia—or outside sleeping porch, and the majority have a small entrance porch, a living room, one bedroom, a bath and kitchenette. One or two have an extra bedroom. They are simply furnished, and rent for \$35 a month during the summer

season, and for \$40 a month during the tourist period. This price includes gas and electricity, care of the lawn and use of the garage for those tenants who have automobiles. This is a moderate rent for so complete a furnished home near Pasadena, where rents are high.

We were so interested in studying the Sierra Madre cottages, that we accepted Mr. Gill's invitation to meet him at Los Angeles, and go with him to see how the same ideas and principles had been applied in designing an expensive house for a wealthy patron. It was on this visit that we had an opportunity to talk with him about his work and to see how perfectly the principle of honesty and sincerity enables one to meet a universal need in the matter of house building. In the choice of building material for instance, the best proves the cheapest in the long run, and so concrete was found to be the best for the wealthy home and the simpler cottage. This principle holds true for the essential details of all construction, whether for rich or poor. Whatever conveniences are included must be permanent and good. Woodwork for interior finish might be mahogany in the homes of the rich and a less expensive but equally durable wood chosen for the cottage, but in both cases the same care was taken to get the best of its kind. Even in the matter of flooring, if Mr. Gill were free to decide the matter, he would advise concrete floors for all his houses, and would have the floors throughout the house or cottage, uniform, the same for the parlor as for the kitchen. His idea in this is that the floors are primarily for utility and stability and that the material which best meets this need, should be used for all the rooms. The house is kept in the background, and if well designed and well built, does not obtrude its presence upon the homemaker. It is substantial, adapted to the needs of living conditions of any given locality and, once built, is easy to maintain and easy to care for. Any one moving into such a home is able to express his own individuality in a thousand ways that are not possible in a house of ordinary design. Whatever beautiful things one may possess in rugs, pictures, books or furniture, may be placed to the best advantage in such surroundings. Nothing would be out of taste in such a home, except things of insincere design and counterfeit material.

Such work as Mr. Gill is doing has a message for the homemaker in any part of the country. The materials chosen to carry out the ideas may differ, the interior arrangement of rooms has to be differently planned and the coloring of walls and buildings adapted to

climates where more somber hues would harmonize better with the surrounding landscape, but the ideas back of his design are permanent and true for any land or any conditions.

Another center where the gospel of sincerity and simplicity in house construction is being taught and lived is at Santa Barbara at the State Normal School.¹ It seems quite fitting that such a movement should have for its home the environment of the beautiful Franciscan Mission which has preached the same message to every generation since it was erected by the loving hands of the early Franciscan fathers. The buildings of the State Normal School are on a lovely site, overlooking the town, with glorious views of the ocean and mountains. They were designed by one of the best architects in California who labored for months to embody the ideas of Miss Edna Rich, the governing spirit of the State Normal School. The result is a building that is characteristic of the best ideals of the Mission type, developed in material that is adapted to the needs of the building and to the amount of money that could be used for the purpose. The tremendously interesting part of the work at the State Normal is that tradition and precedent are only followed where there is some good reason for doing so. Originality and a determined effort to make all the homemaking courses at the State Normal definitely fit men and women to go out and have the best kind of homes, is the purpose of the work. The graduates of the State Normal that marry and have homes of their own are the best endorsements of the success of the teaching. The students can not help seeing on every hand that nothing is done for appearance sake only. Everything about the buildings and equipment has been done for the purpose of utility in the same broad sense in which the word is used by Mr. Gill. There is a great demand for this kind of teaching, and the State Normal can not increase its accommodations fast enough to meet an ever increasing demand for larger facilities and for opening up new departments. Therefore no money can be spent for frills or for creating an impression. Money must go first for the best kind of instructors in each department and to assist ingenuity and resourcefulness in teacher and student who will then make the most of the simple, wisely chosen equipment. Part of the homemaking course is soon to be the construction of small cottages on the campus. Every detail of house construction will be

¹ See frontispiece.

taught by the staff connected with the school and all the work will be done by students taking different shop courses in carpentry, mason work etc. When completed they will be furnished and equipped under the direction of college instructors, and be used to supplement the courses in domestic science.

One other very interesting place for the student of home-making to visit is Mill Valley, one of the most charming of San Francisco's suburbs. Any one who does not realize how artificial are most of the modern real estate schemes, ought to go to Mill Valley to see the development of a community along natural and ideal lines. Situated at the foot of Mt. Tamalpais, with glorious views of the mountain in every direction and wonderful views of the bay, this little village has had every natural beauty given to it to make it a tempting place to exploit according to the most approved modern realty schemes. That it has escaped such a fate and has been preserved as an illustration of how ideal a community life can be, is a wonderful thing for California. One can hardly imagine how any place could be laid out so that every homemaker could get a beautiful view and a little bit of real woodland in each yard, until one sees that it has been done. The paths wind about the foot hills, so that the scheme is somewhat like the arrangement for theater seats, affording the maximum number of good views. Had this been laid out by a practical real estate man this result might not have been attained, because it makes it necessary to do a great deal of uphill climbing to get to the houses, and this might have been argued as detrimental to the quick sale of the land. As it has worked out, however, it has taken the place of the usual "restrictions" which have been thought necessary in other places to protect purchasers from undesirable neighbors. No one goes to Mill Valley to live who does not prize a beautiful view more than he minds a hard climb, thus the community is of "the right sort" as they call it in Mill Valley.

The cottages have been mostly designed by their owners and are very original and picturesque. Trees are never sacrificed to house building. In some cases it has been necessary to build the roof of a porch about a tree to save the tree. Views are cherished in the same way. In one home the front entrance porch has been glorified by having a large window with an enormous pane of plate glass so placed that it frames in a wonderful view of Mt. Tamalpais. Who could

purchase a picture that could compare with this in beauty? Yet here the view was and it only remained for the resourceful homemaker to think of making the window in the right place and of unconventional size. Since the homemakers designed their own cottages, they are far above the average in meeting the every day needs of the owners.

It seems a far cry from a study of such sincere models and such originality and independence in house construction to follow the usual path of the tourist in seeing houses and apartments in Los Angeles and Pasadena. One cannot help feeling that the spirit back of much of the work that is shown with pride to the visitor has been a spirit of commercialism rather than sincere effort to work out the housing problem. Over-ornamentation, cheap construction, and a tendency to cater to appearances are plainly expressed by many of the bungalows and apartments. We do not refer to the many beautiful homes of wealthy people but to the equally large number of dwellings available for the renting class or for sale. Great ingenuity has been shown in making the most of space in the laying out of courts, with cottages grouped around a central space, and in making the most of interior space by studying out every type of built-in convenience and "disappearing furniture." The spirit prompting much of this development seems to be a desire to benefit the landlord by enabling him to charge a much higher price for limited space, rather than to work out improved construction for the advantage of all. Any one who makes a study of all the ingenious ideas represented in these centers can gain much that will prove suggestive and helpful when made properly subservient to the right ideals in building. To study them, however, before one is grounded in the principles which govern sincere house construction, would be of very little real value. For the true message of California house construction we must study the work of men and women who are not catering to a falsely trained, superficial standard of public opinion, but are working toward an ideal.

A STUDY OF THE MANAGEMENT OF THE FARM HOME

ILENA BAILEY

Office of Farm Management, U. S. Department of Agriculture

The study of the management of the farm home was begun by the Office of Farm Management of the United States Department of Agriculture¹ in the fall of 1912. The cost-accounting studies were not commenced however until the following spring. Many studies have been made of the management of the farm, but little has been done toward studying the farm home, although a number of researches have been made concerning the cost of living and other phases of the management of the city home.

The farm home differs from the home in the small town or the large city in that the cost of its maintenance, including labor, is very largely affected by the business of the farm on which it is located. In other words, part of the work which some authorities class (except when specialized) as minor farm enterprises, such as the poultry, the garden, the orchard, and the dairy, is carried on in the farm home. These same authorities also inform us that on many farms the income from such enterprises and the unpaid labor of the family make the returns of the farm business a profit instead of a loss. On the other hand, the farm home is supplied with meat, fruit, vegetables, transportation, and fuel at a much lower cost than the home in the city or small town. Probably in no other line of work are the home and business as closely associated as in farming. The family can work together and yet each member can have his own special enterprise. For these reasons, the farm home needs to be studied separately from the city home.

While the study might be made by working out theories, it seems best to make the present study by collecting data from real farm homes. By the latter method, many of the real problems of the farm home would be disclosed. While it is desirable to have data from a large number of homes, a few studied intensively would give one a clearer idea of the field to be covered in undertaking extensive researches. Accordingly, it was decided to ask a few farm women to

¹ Since this paper was presented, the Department of Agriculture has been reorganized and the work which the author is carrying on now forms a part of the Office of Home Economics of the States Relations Service.

coöperate in this study by keeping certain daily records similar to those used in the cost accounting studies of the management of the farm.

The nearer together the coöperators were located, the more advantageously could the work be carried on and the less would be the cost. It was desirable that a study of this kind should be made in a typical farming district, that is, one which was away from the influence of large cities. It also seemed desirable to undertake the study where agriculture was in a stable condition and not as in some of the western states, where the home suffers because so much of the capital must be used in starting the farm business.

Such a territory was found in central Illinois and central Indiana. Thirty-two farm women were interviewed, and twenty-two expressed a willingness to try to keep the records. Out of this number three failed to send in reports, and it was found after a month's trial that some could not keep the records satisfactorily so they were not asked to continue to send in reports. In three instances serious illness compelled the housekeeper to discontinue the work. These coöperators were located in groups which were easily accessible by short drives from small towns which could be reached by rail.

The women were asked to keep the records for one year. As nearly as possible to the date they began the reports, an inventory was taken of the quantity of food supplies, including meat and canned fruits, laundry supplies, the poultry and the fuel on hand. The information would have been more complete if an inventory had also been taken of the clothing and house furnishings, but it was deemed unwise to include so much in the first study. In keeping the records, two blanks were filled out daily, one for the labor and one for the produce and finances. In making up the blank forms an effort was made to arrange them so that little time would be required to keep the daily reports, yet so that the information would be accurate and complete. As the farm woman's work varies greatly throughout the day it was thought that it would be impossible for her to keep account of her labor by making a memorandum of what she did. However, if her labor was classified it would be possible to keep the blank hanging on the wall in some convenient place and mark down the time at intervals throughout the day. Accordingly, on the labor blank the hours from 5 a.m. to 11 p.m. were marked at the top of the page, and each

hour divided into four parts representing fifteen minutes each. All time was to be reported except that spent in sleep and work which required less than fifteen minutes to perform.

Labor was classified under the following headings: Preparation of meals, Care of House, Sewing, Care of Children, Laundry, Marketing, Personal, Recreation, Poultry, Dairy, Garden, Orchard, Yard, Farm and Household Supplies. One space was left at the bottom of the blank for additional classifications. However, about the only additional classification made was that for time spent in care of the sick. Under "Preparation of Meals" was included not only the time spent in preparing the meal but also that spent in eating, serving, clearing the table, and washing the dishes. The time spent in going to and from town, as well as that spent in doing actual buying and selling, was reported as "Marketing." Under the heading of "Garden" or "Orchard" was reported the time spent in planting and weeding, and in picking the fruits and vegetables. "Household Supplies" included the time spent in canning fruit, making soap and putting down meat. A record was kept of the work done for the home by hired help, children, or the man of the house.

On the Produce and Financial blank, the amount of produce furnished by the farm to the home was recorded and also the quantity and value of articles purchased. The number of extra meals served was reported whenever others than the regular members of the family were served meals. At the end of each week the records were sent to the office and were there checked for missing information. Letters were then written or visits made to secure such information.

While much more data could have been obtained from records requiring more detail, this would have made them very complex. Even with the classifications used, it was found that occasionally two lines of work would be carried on at the same time. The information obtained should be valuable to extension workers and to students of Home Economics in agricultural colleges as indicative of the management of farm homes in the central West. However, the figures should not be considered an average of the farm homes in this section until verified by much more extensive studies. From the data now at hand, one of the results shown will be the length of the farm woman's day. Up to the present time, this information has been worked out for several farms where the home is managed quite differently, but in each instance the length of day was such that $7\frac{3}{4}$ to $8\frac{1}{2}$ hours of the

24 were spent in sleep. This information shows very clearly that the farm woman is getting a fair share of physical rest; that if she is overworked, it must be the intensity of the work or a lack of time for recreation. These farm women, as a rule, began their day earlier than many of their sisters in the town or city, but they also retired at 8 or 9 p.m. instead of 10 or 11 p.m. The time spent in actual work by these same women averaged from $9\frac{3}{4}$ to 13 hours per day throughout the year, Sundays included. However, it must be recalled that according to the labor classification this would include the time spent in eating as well as preparing meals (the housewife usually serves during the time she is at the table), and that the time might also include some lines not always considered work. For example, if embroidery was made to be used on clothing or on household linen the time so spent was recorded under "Sewing." In nearly every home, someone helped with the housework; it might have been the farmer, the grandmother, the daughter, the small boy, or a hired girl.

In Mrs. A's home, for which the information is the most completely summarized, the total hours required on week days to do the work of the home were 19, although during the year Mrs. A herself spent only 13 hours on week days and $6\frac{3}{4}$ hours on Sundays in actual work. The family consisted of Mrs. A, her husband, and a daughter who was away at college nine months of the year. A dressmaker came to the house several times during the year to assist with the sewing, and a woman and girl helped for a few days during the housecleaning season. Aside from this, there was no other help to do the work of the home outside of the members of the family. During the summer season, a corn crib and fence were built on the farm, and the men who did the work took their dinner at the house. This made the family during this season larger than at other times of the year. Occasionally, several of the college friends of the daughter were invited to spend the week-end at her home. The average size of family for the year, guests and help included, was 2.47.

Mrs. A had an average of nearly two hours on week days and six and one-half hours on Sundays for recreation. Under this heading was recorded the time spent in reading, visiting, attending entertainments, writing friendship letters, and going on pleasure walks and drives. The time credited to "Personal" was spent in rest, after-dinner naps, and such other ways as would not come under any of the other classifications and did not pertain to the work of the home.

In Mrs. A's record the time credited to "Personal" averaged the same for Sundays and week days, viz., one hour a day. The combined average of "Personal" and "Recreation" equaled three and one-half hours for the 365 days. The reports from three other women vary from this by less than one-fourth of an hour. For a fourth woman, the "Recreation" and "Personal" equaled about six and one-fourth hours per day. It is interesting to notice that this woman was very active in the clubs of the neighboring town, and the demands of this work undoubtedly account for some of the extra time credited to "Personal" and "Recreation." Should the three and one-half hours reported by the three women as "Personal" and "Recreation" and the twelve and one-fourth hours spent in actual work be verified by a thousand records from other farm women, then the problem for country women in the section studied is, how can the hours required for actual work be shortened and the time for recreation lengthened? The labor records show how time can be saved by having certain work done outside the home, but this may increase the family expenses.

Of the thirteen women reporting, six were not away from home during the year for a vacation of more than one day. Only two of the thirteen women had what might be termed a real vacation. In considering the length of the farm woman's day, it should be remembered that it is not a monotonous one, because while much of the time is spent in preparing meals there is great variety of work. Eight hours spent at a desk in an office or at a machine in a factory is a much greater strain than a mixture of dishwashing, laundry work, gathering eggs, picking fruit, and weeding the flower bed, for the same time. The woman in the home is the manager of her work, and as such can adjust it within certain limits.

The Produce and Financial Record shows the amount expended for food, clothing, shelter, etc., the quantities and varieties of food furnished by the farm, and those purchased. It will also show how the cost of food can be decreased and yet the quality of the food kept up to a high standard.

Another result of this work is the determination of the essentials of a system for keeping accounts which will be of value to the farm woman who wishes to manage her home efficiently. These detailed studies have suggested several distinct lines for further study, most of which can be made by the survey method. The homes of the

country may be considered as laboratories where experiments are constantly being made, the results from which are seldom tabulated.

For making permanent progress, the study of existing conditions is the surest foundation. With this knowledge plans can be devised for improvement.

HOME ECONOMICS WORK UNDER THE SMITH-LEVER ACT

A. C. TRUE

U. S. Department of Agriculture

The Smith-Lever Act makes provision for "coöperative agricultural extension work which shall consist of the giving of instruction and practical demonstrations in agriculture and Home Economics to persons not attending or resident" in the agricultural colleges. There is nothing in the Act making any division of the fund between agriculture and Home Economics. The money goes to the state agricultural colleges, which are to make plans for the work subject to the approval of the Secretary of Agriculture.

This Act is the outcome of the agricultural extension and demonstration work which the United States Department of Agriculture and the agricultural colleges have been doing for a number of years.

The work rests on an economic basis. Fundamentally it is an effort to make farming more efficient and remunerative. In this way it is hoped that the farmer and his family will have a larger net income, and will thus have the means for improving their home and community life.

The Department has more than \$1,000,000 annually for demonstration work, and it has been arranged to carry on this work in coöperation with the agricultural colleges. The colleges have agreed to bring all their funds for extension work whether derived from the Smith-Lever Act or other sources under a single administrative division which will also have the administrative control of the Department's funds coöperatively used in the state. This makes a somewhat complicated situation in most of the states, and in order to understand what is actually being done in any branch of extension work in any particular state, it is necessary to know the actual conditions existing there.

During the current fiscal year each state has had only \$10,000 from the Smith-Lever fund.

In many of the states a new organization for extension work had to be created at the college. For this reason a relatively large share of this fund has gone this year into administrative expenses.

The general plan adopted for extension work in the states has the following features: (1) Extension agents are located in the several counties to carry on demonstrations, advise the agricultural people, and stimulate them to adopt better methods; (2) Boys' and girls' clubs are organized, largely in connection with the rural schools, to conduct some simple agricultural or Home Economics project; and (3) A staff of specialists in agriculture and Home Economics is organized as a part of the faculty of the college and with headquarters at the college, to go out through the state to assist the county agents, to carry on movable schools, etc.

For the present, by far the largest part of the funds available for extension work are being used in paying the salaries and expenses of county agents. Agents are now located in a little over 1000 counties out of the 3000 in the United States. Until the other counties are provided for, a relatively large share of the money will go into this branch of the work. The County Agent is a man trained in the science and practice of agriculture and familiar with the conditions in farm homes. He aims not only to improve agricultural practice, but also to aid in bettering home conditions. He will assist the farm women in getting in touch with the Home Economics experts which the colleges employ, and also help them in improving the sanitary conditions of their homes, getting better and more convenient water supply, and other things which will lighten their labors. He will also aid the women in carrying on various home industries, such as the raising of poultry, bees, vegetables and fruits, in order that they may have more money for their special needs in the home.

As soon as practicable it is expected that women trained in Home Economics and knowing country conditions will be associated with the men agents in the several counties and be able to carry on a greater variety of work directly relating to the farm homes. There are already about four hundred such women employed in the South, where the demonstration work has been carried on longer than in the North and West.

In the northern and western states the Home Economics work has thus far been chiefly done by women sent out from the colleges. More such women are now being employed throughout the country, and

the extent and variety of the work in Home Economics is rapidly increasing.

Public interest in improving the general conditions of country life and the environment and management of farm homes is becoming so widespread and earnest both in our agricultural institutions and among the agricultural people that there is every reason to believe that extension work which will be of direct benefit to the farm women and girls will increase in extent and thoroughness fully as rapidly as the means and persons available for such work will permit. The conditions vary greatly in the different states as regards the funds, organization, and supply of trained workers for this service. The most important things for the friends of this movement to do at present are to make a broad study of its scope and requirements, take a sympathetic interest in the plans which are already being made or are in operation, and help in the framing of definite and improved plans for a broader work. The American Home Economics Association has been greatly interested in the defining and organization of the subject of Home Economics and in the working out of definite plans for teaching this subject in the colleges and schools. There is now great opportunity for the Association to help in the development of the extension work in this subject, and at the present time, particularly in the planning of the training of the persons who are to do this great work in the rural schools and homes.

APPLICATION OF SMITH-LEVER FUNDS¹

The Smith-Lever Act provides for extension work in agriculture and Home Economics, but it does not specify what proportion of the funds shall be used in Home Economics. The state agricultural college extension directors are being urged by women's organizations of various kinds to allot a certain specific portion of the Smith-Lever funds for work with women. In view of this fact, it is interesting to note the amount of money actually being put into this work by the agricultural colleges, for the most part in coöperation with the United States Department of Agriculture. Data taken from the records of the department and relating exclusively to work of this kind in the 33 northern and western states show the following distribution of funds:

¹ Office of Information, U. S. Department of Agriculture.

- (1) For meetings and movable schools at which demonstrations are given in cooking, sewing, household conveniences, and for the organization of women's clubs to study Home Economics..... \$81,555
- (2) For canning clubs to teach girls and women how to prevent many of the wastes of the farm by canning and preserving fruits, vegetables, and meats by cheap and rapid commercial processes..... 56,197
- (3) For county agents who help farmers and their wives to increase the net income of the farm, and thus make possible the introduction of labor-saving conveniences and other improvements into the home..... 1,027,312

From the above it will be seen that there is being spent a total of \$137,752 directly and \$1,027,312 indirectly on lines of work affecting the farm home. The former amount is equal to 42 per cent of the Smith-Lever fund available this year for extension work in the 33 northern and western states, while the latter is more than three times the entire Smith-Lever fund available to all of these states for the year 1914-15.

NEED FOR CAREFUL PLANNING

Extension directors in the North and West are just now concerned as to how best to approach the Home Economics problems of the country and what kind of an organization to develop for carrying on the work. Shall there be developed a woman county agent who shall work with farm women in some such manner as the county agent works with men? Just what, in detail, shall such a woman do? How shall she organize her work and how go about it? Shall it be required that the county pay a part of her salary and expenses, as in the case of the county agent? What training and qualifications shall be required of women agents who take up such work? Men take up the work as county agents as a permanent life work. Women agents are very likely to leave the service to manage homes of their own. In view of this fact, how shall the work be organized? The Washington office (States Relations, Service, U. S. Dept. of Agr.) will welcome comments and suggestions from all county agents and extension workers who have given attention to this matter.

OBJECTIONS TO FARM LIFE

The chief objections of women to country life are usually (1) the generally small returns in farming, (2) the drudgery of farm work, and (3) the social isolation. More money for home conveniences and greater efficiency in household management both have in view the lessening of the drudgery of farm work and the securing of certain periods of leisure to farm women which may be used in productive, social, and recreational ways.

FUNDAMENTAL HOME MATTERS

Extension work designed to be fundamentally helpful to farm women would seem, therefore, to include within its scope certain matters, as follows:

1. *Plans to increase the net income of the farm.* Farm women need more money for home purposes. The purchase of home conveniences, the installation of water, sewerage, lighting, and heating systems, kitchen and other conveniences, and the bringing of literature and music into the home are, in the majority of country homes, dependent upon greater net profits in farming. Knowledge of these conveniences and other desirable things is good, but money to buy these desirable things is a vital necessity if country life is to be made as acceptable to women as town life. The county agent is giving especial attention to this phase of the work.

2. *Plans to teach and demonstrate efficiency in farm home management.* These include such matters as wholesome food properly prepared and served in adequate supply and variety, throughout the year, the care of the home and the family linen and wardrobe, the care and management of children, and sometimes the handling of certain farm enterprises like poultry and eggs, milk and butter, the garden, small fruits, etc. Efficiency in farm home management contemplates the maximum of accomplishment with the minimum of effort to the end that the farm family may find satisfaction and contentment in the home, and that the time of the farm woman may be conserved.

3. *Plans for leisure and development.* The farm woman needs time for reading, self-development, child teaching, social life, and recreation.

A PROBLEM FOR COUNTRY WOMEN

In the development of Home Economics demonstration work, there needs to be kept in mind the point of view that the problems of country women must chiefly be solved by country women. The county agent movement in some sections of the north and west started out primarily as a city man's movement, but it has succeeded in exact proportion as the farmers of the county have taken hold of the work and made it their own.

COÖPERATION OF CITY WOMEN

City women can help in the development of the forthcoming demonstration work in Home Economics for country women. One of the ways in which city women can be of direct help in the movement is through greater social intercourse with farm women, through direct purchases of poultry, eggs, butter, fresh and canned fruits and vegetables, and by coöperating with them in the maintenance of rest rooms, nurseries, etc., for farm women when they come to town. But what farm women need and how to meet these needs are matters which must be worked out chiefly by farm women themselves. The criticism sometimes heard with reference to much of our Home Economics teaching is that such teaching is done primarily from the standpoint of the town woman. The country woman's problems are the problems of the country and must be approached from that standpoint.

LIFE IN RURAL FRANCE

COMPILED BY HELEN W. ATWATER

United States Department of Agriculture

So many of the books of travel and description which one takes up nowadays are so obviously worked up from the hasty traveller's note books, eked out with a few facts from Baedeker and the encyclopedia, that it is a rather unusual pleasure to come across one written from the fulness of knowledge and with the sympathetic understanding which comes from long familiarity with the people and places described. If, in addition to knowledge and sympathy, the author has the rich mental background of a serious student of history and social questions and the literary skill of a successful writer in prose and verse, the book is likely to give pleasure of an even less common quality.

Exactly such a book is "The Fields of France" published by Mme. Mary Duclaux in 1903.¹ English by birth, and later a student at the University College, London, she is far from insular in her training and experience. She lived in both Belgium and Italy during her school days, and has passed her married life in France. Though most of her writing has been done in her mother-tongue, she is sufficiently familiar with that of the land of her adoption to be a frequent contributor to the *Revue de Paris*. One wonders if this bilingual facility may not be the innocent cause of what is perhaps the least pleasant feature (by no means a serious fault) of her English books on French subjects, namely, a tendency to use special French terms where English equivalents would seem more suitable to the less accomplished reader.

History seems to have had a special attraction for her, not the history made up of "dates of wars and deaths of kings," but that which reveals the everyday life of peasants as well as nobles, and which is to be found scattered here and there in old memoirs and romances and ballads rather than in the formal treatises on past events. Nor is her interest confined to by-gone times. History-in-the-making, as it is shown in the lives of her neighbors among the workingmen and farmers and wealthy landlords in France and England, seems as interesting to her as that of ancient times. Small wonder if, with this unusual equipment, she is able to describe the French country life which she knows and loves sincerely, in a way that has not only charm but real significance for anyone interested in domestic manners and customs.

Not all of the seven essays which make up the volume are equally interesting from this particular point of view. Those entitled "A Little Tour in Provence" and "The Forests of the Oise" give the impressions of the passing visitor rather than of the old familiar resident, but the latter mentions a dish, locust blossom fritters, common in that pleasant wooded country, which no one interested in what the world eats can afford to miss.

O white-flowering delicate mock-acacias And what shall I say of your blossom—delicious to every sense—an exquisite rain of white pearls, dropping fragrant perfumes on the tree, which, plucked and delicately fried in batter, make a *beignet* worthy of Lucullus?

¹ London, 1903, pp. VII + 318. Chapman & Hall, Ltd.

The first two essays are running over with charming descriptions of present-day customs in rural France. One of them, "A Farm in the Cantal," describes the life of the people near the author's country home in the mountains of Auvergne, where Nature shows her wild volcanic mood and is none too friendly to the husbandman. The other, "A Manor in Touraine," tells of twentieth century country life in the "garden of France" where kings and princes built their lordly pleasure houses, and the country is still as smiling and fertile as any in the world.

The Auvergne home is named Olmet and is perched on one of the steep volcanic hillsides characteristic of the region. The family live in the old manor house standing above what used to be the manor farm; the latter has changed hands and is now leased by a sturdy and successful Auvergneat named Langeac. In the essay on "The French Peasant" we are told that he pays a yearly rent of \$2000, and is envied by his neighbors for being able to secure a farm large enough to prosper. But let Mme. Duclaux tell of her house and his in her own words.

Farm and house [manor] no longer belong to each other, but they are still on cordial terms; which is as well, since from our hinder terrace our eye drops involuntarily on all the life and business of our neighbors. The farm house has been recently rebuilt by its new owner, and is no longer the picturesque hovel we used alternately to admire and deplore. But our tiny mountain manor, or moorland cottage, still bears the stamp of three hundred years on its thick solid walls and tower. The roof is beautiful, very steep, as befits a land of six months' snow, and a soft ash-grey in color, being covered with thick heart-shaped tiles of powdery mica-schist, which surmount with a pyramid either tiny solid turret: a balcony starts out of the tower, whence you could sling a stone into the bottom of the valley, for Olmet stands on a jutting rock, to the great advantage of our view.

The house is stunted from the front, where the garden is on the level of the first floor; but, seen from below, there is about the place a look at once austere and peaceful, rustic and dignified, as befits this land of hay and lava, of mountain peak and cream.

In the following paragraphs we are shown the typical home of her peasant neighbors and their various tasks through the changing seasons.

These genial and kindly peasants live in farms roomy and solid, built of blocks of grey volcanic stone; the steep roof has several tiers of windows:

one would suppose it from outside a comfortable home. But in name and in fact the attics are granaries, and all the household crowd together in one or two rooms on the ground-floor. A huge chimney, with a hospitable mantle, shelters a couple of comfortable salt-box settles, reserved for the old; one stands on either side the cavernous hearth, where, winter or summer, smoulders the half-trunk of a tree; there is a tall grandfather's clock and the dresser is bright with painted earthenware dishes and pewter tankards; the best bed, high as a catafalque, stands, warmly curtained, in the corner under the stairs; a linen cupboard of walnut or cherry-wood, a huge massive table of unstained oak, flanked by two benches, a straw-bottomed chair or so, a few rough stools; such is the furniture of a kitchen in our parts, seldom clean. Here all the cooking is done, and the eating; here the other day I saw, in a box-bed, like a ship's berth built into the wall, a young mother and her baby one day old, perfectly happy, while the farm-hands lunched at the table, and the fowls strolled in and out; here the masters sleep, in sickness and health; here visitors are received and farm-hands paid—it is, as they say in Yorkshire, the house-place. With its one window, its floor of dark, unsmoothed volcanic stone (swept every day, but rarely washed), with its ceiling hung with herbs and sausages and huge sides of bacon, it is a warm and homely refuge, but not, as a rule, a bright or a pleasant place.

Winter is here! The daily round has narrowed its circle. A path is cut from the door to the gate, another to stable and drinking-trough, where the unfrozen ever-flowing fountain splashes over a fringe of icicles. The walls of snow glitter, and melt not in the sunniest noon. The farm kitchen is now the center of all works and days. The huge hearth-place is a cavern of warmth and glow. Soon after three the hilltop intercepts the sun; a little later, the beasts having been milked and fed, masters and men assemble round the fire. From the ceiling hangs the three-beaked Roman lamp, but the flames, leaping from the beech-trunk on the fire-dogs, give a brighter light. Rare are the farms as yet where a petroleum lamp enlivens the gloom. The farm-hands, cutting a bough of cherry or beech, renew the handles of their scythes, mend their tools, or knock a fresh set of nails into their sabots. The women twirl their distaffs and spinning-wheels or sew their seam.

A scent of cabbage-soup and hot buckwheat comes up from the cottage kitchens.

[In the summer], we are busy in the valleys, where the recent advent of the railroad has little changed the ancestral mode of life. The farm grows almost all the necessaries of our table. Our soil is too poor for wheat, but

rye and buckwheat flourish on the mountain-sides; whole slopes and ledges, too dry for hay, are a garden of tall, crisp, white flowers, where the buckwheat (*sarrasin*) waves through August until mid-September. A little before Michaelmas the flowers die, the seed turns gradually black, the stems coral-red; and then the farm-hands come and reap the harvest, bringing great sheets of linen, which they spread in the field, and thresh thereon the grain with high-dancing flails. Ground into meal, the buckwheat yields the staple of our diet; the *bourriol*—a large, thin, soft, round crumpet, which, eaten hot with butter, or cold with clotted cream, or a nugget of cheese, or dipped in new milk, is not to be despised. Every morning, the housewife's earliest care is to fill the pail of *bourriols* which stands in every kitchen; next she warms the milk until the cream clots and rises. Besides the buckwheat, we grow oats for the cattle and rye for bread and straw. The rye-bread, very black, at once sweet and sour (which makes, to my thinking, the most delicious bread with butter in the world), is shaved into large thin slices in the two-handled porringers, or *écuelles*, "*pour tremper la soupe*." Four times a day, and five at midsummer, the farm-hands gather in Madame Langeac's kitchen and take their bowl of cabbage-soup, where the bacon, potatoes, black bread and cabbage make a mess so thick that the spoon stands up in it; they eat also a crumpet of buckwheat, and a noggin of Cantal cheese; and often a dish of curds and whey, when a cheese is in progress; a sausage if the pig has been lately killed; a fry of mushrooms in September; a tart of wild cherries in July; or carrots sliced and fried with snippets of bacon; sometimes a queer stew of potatoes and curds called *truffado*; or some other homely treat which, at midday, serves to mark the importance of dinner, always washed down with a glass of the strong bluish-red wine they call *Limousin*, brought from the neighboring departments of the Lot and the Corrèze. Fine brawny men and buxom maids, who work hard and live long, are grown upon this sober fare.

But listen! What unearthly noise is that which rises at this very moment from the farm? No pigsticking, for we are in summer still. There goes Madame Langeac, followed by her two maids and a small boy; each of them holds high a copper saucepan, warming-pan, or kettle (serving as a cymbal), on which she clatters with a key or fork. The three dogs and old Gaffer Langeac look on and grin. Slowly in calm procession they move down the lane till they reach the old walnut-tree in the field beneath our wall. And now I see a sort of fruit on a bough of the tree, like a black hanging pear or melon. It is a swarm of bees. From field to field, its owners have followed it with this infernal symphony, which serves, as they suppose, to attract the bees, or in any case to advertise the owner of the land on which they settle, whose property they are. See, a woman brings the hive. Tomorrow, the swarm will be busy in its straw-clad home on

the sunny bench beneath the south-east wall. And the bees will take rank as friends. On feast-days the children will deck their hive with flowers or colored ribbons; a bow of crape will be tied to it in times of mourning. So, deeming themselves beloved and associate, the bees will work and supply their masters with the sweet, dark honey of Auvergne, so pungently perfumed, so luscious and aromatic, filled with the scent of the heather and the savor of the sarrazin.

No one has ever invented anything like the smell of the new-mown hay fields, which, in summer, perfumes the whole of Auvergne! Hay is our wealth, and—when it has suffered a transmutation into cheese and cattle—our only export and exchange with the valleys below. It is in order that we may grow our hay all summer for the winter's needs, that our cattle are sent in troops to feed on the mountain tops, leaving behind only the draught-oxen and the cows for milking. We need plenty of hay, for, in the stables during the five months of snow that follow All Saints, you may roughly calculate four cartloads of it to every cow. On the higher slopes, we cut it once in July and again in September; while, June, August, Michaelmas, and early October are haymaking time for the water-meadows in the bottoms, which yield four crops a year.

At night the cattle pull through the narrow roads the primitive hay-wains, after the wains, the herds come tramping. Old Gaffer Langeac, the farmer's father, has come out to view the crop. He is five and eighty, and, being past work, he wears all the week his long-treasured Sunday garments—a sleeved waistcoat of black cloth, the full sleeves buttoned into a tight wristband, a white shirt of coarse hemp-linen, and dark trousers of thick homespun *rase* or *frieze*. His blue eyes, still bright, and his straggling white locks gleam under a huge soft sombrero of black felt. He is a fine fellow—but is not this the very valley of green old age? An ancient goat-herdess comes down the lane, twirling the distaff set with coarse grey hemp, as she follows her flock; and as she stops to pass the time of day with her neighbor, her youngest grandchild runs out to meet her from the red-gabled cottage by the village bakehouse.

Down in the field below, the women are busy. Every man within range of many miles is absent today at Aurillac for the Martinmas Fair; and, as the ploughs for once are left at home, the women, free from field work for one afternoon, have decided to restuff their mattresses. Soon after dawn they came and gathered the beech-leaves beneath the trees, raking them in heaps, piling them in sacks, and finally strewing them to dry and air, like hay, in the sunny fields at the base of the woods. And now, this afternoon, here they come with their mattress-sacks of white canvas,

fresh washed and speckless, into which they cram their harvest of beech-leaves. The weather has been fine for some weeks, so we trust their bedding may not be too damp. Now that the leaves are gathered, but only now, they will drive the pigs into the woods to feed on the acorns, while the children collect the beech-mast, "the olive of the North," carefully treasured for the winter's oil.

That last is an important consideration. Oil for burning o' nights in the long winter evenings; oil for frying and cooking in a land where butter is scanty and poor, for our milk (so rich in caseum) has very little cream. The nut-harvest follows the gathering of the leaves; and the walnut, of course, affords the richest crop. Every farm has its walnut orchard, and while the men knock the fruit from the trees with long poles and perches, the maidservants shell the nuts and prepare them for the mill. Thence will return the salad-oil; while the beech-mast, hazel, and hemp-grain will furnish the three-beaked brass *liin*, or Roman lamp, all winter. At Olmet, the fisherman (who, from his little farm down by the river, ensnares and nets all summer such trout as the otter leaves him to make an honest penny by) turns miller in winter, and crushes the walnut harvest, in a great cellar, between two millstones of black basalt; an ass is harnessed to the upper millstone, and turns laboriously round and round in the dim place, while the oil streams from the crushed kernels. The pulp left apparently dry, but still impregnated with oil and aroma, is an excellent food for fattening beasts, and not despised by the young of the human race. This is the perquisite of the miller. Would I could make you see him—a tall, lean peasant, full of a rough poetry as he curses his foe, the otter, who eats the speckled trout at dawn in the fisher's nets!

If there is a harvest of nuts, there is also a harvest of feathers. The nights are getting cold, it is time to look to the bedding. Every farm keeps its tribe of geese, whose down (plucked from the living bird six times a year, at new moon) is now sufficient in quantity to make or refresh our *édredons*. The poultry yards afford material for the feather-beds; the flocks of brown sheep give their fleece for the mattress, and for the warm Auvergnat quilts of wool, sewn fast between two sheets of flowered cotton print. All these must be made over or renewed. Our dark and somewhat dingy farms have soft, clean, and ample beds piled high in their kitchens, wherein to brave the shudders of snowy winter nights.

These are play-harvests; but the gathering and preparing of the hemp is a thing of time and patience. Every farm in the Cantal has, in some sunny corner of a field, a little three-cornered walled space, *l'ort de lo combi* (the hemp garden). Here the handsome sturdy plants are grown, and hence, in July, the male stems are torn, to make more room for the seeding of the female plant. A little after Michaelmas these are ripe. They are

torn up by the roots, and left to ferment in upright heaps well covered. Eight days later their martyrdom begins; they are shaken till the seed falls from the pod; they are stretched in a water-meadow to rot; they are dried in the oven; they are rubbed, beaten, crushed, pounded, combed with iron combs, till nothing is left of their sturdy green grace and rustic beauty, no likeness of the poor handsome female plant, only a mass of loose tow and formless fibre. And from this the grey thread is spun, on autumn afternoons and evenings, as the women follow their flocks along the lanes, or sit round the fire, cracking jokes with the grandfather on his comfortable settle in the inglenook. Every village has its weaver. When the thread is spun he puts it on his loom, and weaves the strong hand-made hemp-linen from which our farms are furnished with sheets, tablecloths, napkins, white shirts for the men and underwear for the women. It comes home in dreary lengths of grey, and must be bleached in the morning dew, before the hands, which have planted and prepared the hemp and spun the thread, can fashion and sew the tissue. Open the linen-cupboard in any farm kitchen, and you will be amazed at the wealth of its heaps of rustic creamy white.

Our weavers do not weave, our women do not spin, only hemp-thread and linen. Every man on the countryside, of the peasant class, is clad in the stout *rase* (thick rough cloth), or frieze, which his brown flocks wore first of all, his own hands sheared, his wife's clever fingers spun, and which was woven on the village loom. Never have I seen so stout, so thick a fabric. One glance at the heavy cloth, striped brown and black from the undyed wool of our sheep, makes one understand the nipping cold of winter on our hills.

Meanwhile, the buckwheat has been harvested and garnered; on sunny afternoons the old wives winnow the grain in sieves on every threshold. The poorer sort goes to feed the fowls and fatten the calves for the Martinmas fair; while the perfect grain is set aside for the daily *bourriols*. The apples now are ripe. They should be gathered, save the later sorts, and laid on straw in the fruitery, before the little cowherds come down from the mountains. The chestnuts must be brought from the lower valleys—a dozen miles away, where the conjunction of a milder climate with a granite soil lets them grow in abundance; the potatoes must be uprooted from the fields. With buckwheat-meal, potatoes, chestnuts in store, the farm can affront the winter. And now, in this year's potato-field, the plough is put; and the sower, with a noble gesture, scatters far and wide the grain of the rye. Two women follow him, and gather in a basket any stray potatoes now upturned. And close after the plough hop some half-dozen ash-grey buntings, neat and slender, pecking the worms and seeds from the new-turned clods.

A little after six the supper is spread: a porringer of soup, followed by

the bacon and the cabbage which gave it flavor, and a nugget of cheese. By seven, a neighbor or so has strolled in to share the *veillée*. The farmer throws a handful or two of chestnuts to roast in the embers, and sets, mayhap, on the table a bottle of red wine. And the stories and the gossip begin again till the log, burned through, falls with a crash from the fire-dogs and sends up a fountain of sparks. The cricket sings a shrill song, but hark! without the snow-blast sings more shrilly yet. The clock strikes half-past eight. Master and men arise and bid each other good night.

As in the mountains of Switzerland and Savoy, the cattle of Auvergne are taken to the upland pastures in the early summer, and there they and their herdsmen stay until cold weather puts an end to grazing at those altitudes. Anyone who has seen the "Sennerhütte" of the Bernese Oberland or watched the cheesemakers in Gruyère will feel that he is meeting old friends in Mme. Duclaux's herdsmen in their mountain huts.

There are empty places tonight at the vast table in Langeac's kitchen; for the *Vacher*, or chief cowherd and dairy-master, with two *bouviers*, or cowboys, and a little lad, the *pâtre* (whose business is to watch the cattle that pasture on the moor), are up on the mountain with some fifty cows, half as many young calves, a young bull or two, a score of swine to fatten on the buttermilk, and some dozen goats. At the end of May, one mild afternoon, the troop set out from the valley under the farmer's care and marched the whole night through, till the next day, in the morning, they reached the mountain farm, some thirty miles away.

However we may call it, a *buron* expresses a little lonely habitation on the mountain, almost a hut, where the neatherds sleep in summer, and where the cheese is made, day after day, from the end of May till mid-October. It is a long climb from Olmet to the plateau whereon these little cheese-farms multiply and prosper. The road, in steep zigzags mounts the hill; we leave the pasture behind us, and the fields of flowering buckwheat, and even the high heathery ridge of the *Pas du Luc*; we enter the hanging beechwoods and crawl up the wall of the cliff, until lo! we emerge on a great sea of undulating pasture-land, apparently illimited, save here and there by a grey mountain peak. The foreground is studded with tiny red-roofed *burons*, each shaded by its group of centenary limes.

"The grass that grows up here, on the puys and the plateau,
Is not like that below, it is rougher and more wholesome:
It smells good; there you find the proud gentian
Who displays her yellow flowers like a banner."

It was after four when we at last reached the *buron*. The cows had come in from the moor to the fold. The milkmen had donned their blouses of grey hemp-linen, which hung in stiff hieratic folds.

After the milking time at dawn the cattle are set free, and all day long they pasture in the *aigado*, or marshy moor, where the gentian, the pink, the meadow-sweet and larkspur grow among the rush and the broom, the bilberry and heather. Here the grass is scantier, but sweet and aromatic. To the quantity of wild thyme and savory herbs in the *aigado*, the peasants attribute the wholesome flavor of the Cantal cheese.

A mountain farm often boasts in summer some three score to a hundred head of cattle, besides the pigs to fatten, and the goats, from whose milk is made a delicate little round cream-cheese, the *cabecou*.

Cheesemaking is the great trade of our parts, for here the cheese is the gentleman who pays the rent (*le fromage paie le fermage*), say our farmers. Push open the door under the lime-trees. You enter a moderate-sized room which occupies the whole ground floor, paved with rough volcanic stone, dark grey, and slopped with whey. In one corner stands a primitive open fire place, with a pan or two and a cauldron for the herdsmen's soup; close to it are placed a rough table and a bench. The rest of the space is devoted to cheese-making, and is filled with narrow, man-high wooden measures, or *gerles*, each containing a hundred litres of milk or so, with cheese-moulds, and cheese-wrings, with tubs in which the whey ferments, producing at the end of three days a pale fat cream of which the herdsmen make their butter, and finally with the churn—the whole indescribably sordid and dirty. A tiny garden surrounds this primitive dwelling, and furnishes a few rough roots for the soup, turnips come well there, it is often too bleak and high for cabbage. But the wealth of the *buron* is stored in a cellar under the hill-top, opening to the north. There are laid, on a rough trellis of wood, the huge golden cheeses, each a hundred pounds in weight (fifty kilos). They look like so many full moons, laid under the earth to keep fresh till they are wanted in Heaven. These cellars generally join the hut; but, as their coolness and depth is of vast importance, sometimes a cavern is hewn in a favorable spot on a solitary mountain side. Few things are more startling to the traveller unaccustomed to our parts than, while admiring the vast and melancholy landscape, so wild, so green, so unutterably lonely, to find himself suddenly assailed by an unmistakable stench of Cantal or Roquefort cheese.

(To be concluded)

THE HOME AND CHILD LABOR

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Child labor affects vitally and directly the homes in which child workers live. When children go home tired out, often from insanitary and immoral surroundings, their physical and mental development arrested, robbed of their play time and their childhood, deprived of education and training, filled with an attitude of bitterness because of the inequalities of life between themselves and their employers—when these conditions exist, home life can be but sordid and empty. If the work is done in the home itself, the undermining of health, mentality, and morals may be even worse. To such homes the future offers little hope. Fully ninety of every one hundred child workers are in occupations that are unskilled, which offer little advancement in themselves and lead to nothing better. In many cases the parents themselves are made indifferent and dependent by the fact that their children are permitted to support them and they become little better than parasites. The home, offering nothing to counteract the enervating and depressing attitude developed by the day's work, is abandoned for the excitement of the street or the cheap sources of melodramatic entertainment. The path of least resistance is almost wholly away from wholesome home life and from wholesome recreation and entertainment outside the home. Some parents are pauperized, others are broken and dispirited by the pitiless struggle. To make the tragedy greater, no one seems to care—those who should care seem not to see and “pass by on the other side.”

Child labor is also the arch enemy of the homes in which these child workers will bring forth their own children in a not very distant tomorrow. Undermined health, low vitality, want of education and training, low personal efficiency, sordid and mercenary ideals of family life, these are the factors which will determine the kind of homes these child workers will make for the next generation. Indeed, this is a case in which the sins of the fathers will be visited upon many generations to come.

But not alone the homes of the child workers themselves and of their posterity are receiving the baneful influence of this sacrifice of rich social capital. Besides the homes directly involved all other

homes are indirectly affected. All of us use the products made at the cost of the life blood of these children. All of us have the means of knowing industrial and related social conditions. All of us have the opportunity to exert an influence for or against the practice of child labor. Some communities and states have stamped out child labor within their own boundaries, but in many states personal and corporate greed are still ruthlessly sacrificing children and fighting progressive legislation with every means known to the political plunderer. Nothing less than nation-wide control can safeguard the childhood of all communities. Until child life is safeguarded in all communities, every home must, in some measure, share the responsibility and suffer the shame.

Home and school may coöperate in such studies of industry, of the social and moral well being of workers, of hours of labor, of sanitary and other vital conditions of production in industry, and of child labor itself so that the public sympathy and intelligence may be enlisted in a great league of consumers and citizens who will neither use nor sanction the use of any product made at the cost of the health, mental and moral development, or happiness of child life.

Child labor is a form of social cannibalism; it is even worse than the cannibalism of savages, for it consumes the ambition, and vitality, and life values of its victims, leaving their broken bodies and their broken hearts to live on in suffering and wretchedness. Until legal enactment and social enforcement guarantee protection and security for every child in coming to a reasonable maturity with health, education, and an even chance, no home is permanently secure against the menace of child labor. It is not only that child labor is cruel to the workers themselves, cowardly and selfish of those who practice it and profit by it, and shameful to those who permit it, but it is the very worst form of social economy—it is the sacrifice of our most precious social capital. By the national wealth lost every year through child labor, every home is made poorer. So long as every home shares the responsibility of child labor it also suffers the shame and shares the guilt.

CHILD LABOR LAWS PENDING

In sixteen states campaigns are now being carried on to improve the Child Labor Laws.

Some of the improvements that have been enforced are the 14-year age limit, the 8-hour day and no night work under 16, the regulation of the street trades, and the issuance of work permits, including proof of age, educational qualifications and physical examinations.

The regulation of street trades has been neglected, although there is every reason why street work should be as carefully regulated as factory work.

In North and South Carolina effort is being made to secure a 14-year age limit and an 8-hour day.

In Iowa, Illinois, California, Connecticut, Michigan, Minnesota and Missouri the Child Labor Committees are working to secure protection for young children from the moral dangers of street trades, and to limit the hours of work to 8 per day.

In Texas they are working to extend the present age limit to a number of occupations, not now covered and also to limit the hours of work.

In Utah and Maine they are working to extend the 14-year age limit to occupations other than those in factories, and also to provide an 8-hour day and no night work.

In Vermont, they are working to extend the 14-year age limit to occupations not now covered and to prohibit work under 16 in quarries and dangerous occupations.

In New York they are working to provide an 8-hour day.

In Pennsylvania effort is being made to abolish the exemption law allowing boys of 14 to work at night in the glass factories; to regulate the street trades, and to require physical examinations.

The *Survey* for March 6 printed a detailed account of the Child Labor Laws pending in the several State Legislatures. Look for your own state and see what you can do to help.

The proposed Federal law forbidding the transportation of products of child labor from one state to another passed the House of Representatives recently and all but passed the Senate. It will be re-introduced in December and can be enacted if all interested will rally to its support. All Home Economics workers should secure facts from the National Child Labor Committee and write to their United States Senators and Representatives.

EDITORIALS

Child Labor. We wish to call attention to the plea made by Professor Bonser in this number for a realization of the evils of child labor, a realization that, if general, would so work upon public opinion that existing laws forbidding the practice would be carried out and more stringent laws passed. An editorial on the subject in the *English Journal of Education*, while citing cases where lads of 13 were held to a 15-hour day on Saturday and of school children who worked from 4.30 a.m. till school time, again at midday and after school until late in the evening, yet said that in carrying out the law there was "little progress to report."

The reason for this apathy among the well-to-do classes, to whom we must look for bringing the weight of public opinion to bear, must be sought, we feel sure, in ignorance of the conditions that prevail in other classes less fortunate. There is among us a reaction to be noted from the former over-indulgence of our children and a realization that perhaps more work and responsibility would do them good, and without thought we apply this idea to children who need every favorable opportunity for physical development, for out of door life, for the joy of play, for abundant sleep, advantages all impossible to children who work under conditions only reasonable for the adult. The remedy for this indifference is *study of the facts*—learning what are the laws in our own state regulating the employment of children and how far they are carried out, best of all coming in contact with the children themselves in order to realize the stunting processes that are going on which are certain, as Professor Bonser says, to result in the deterioration of the homes of the future; for it is a fact that low standards in the home of the child are more to be blamed for furnishing this labor than is the factory or the cannery for taking it. Anyone who doubts this fact will be convinced by reading that remarkable social study by Professor Breckenridge, *The Delinquent Child and the Home*.

It can not be too strongly insisted that the enforcement of child labor laws throws responsibility on the educator and the parent. Professor William A. McKeever, author of that excellent series *The*

Home-Training Bulletins,¹ quotes the superintendent of industrial training in a large New England town:

This new and radical child-labor law is threatening to throw society into great confusion and to furnish the occasion of much juvenile crime. The law has turned out into the streets idle, many hundreds of boys and girls who were employed in the various manufacturing establishments. As a rule the parents are entirely unprepared to cope with the situation, having little means of home employment for their children and less knowledge of how to discipline them in idleness.

He also quotes Judge Ben Lindsay as saying to the author just as the former had closed the trial of a 13-year -old boy for stealing,

This is one of our greatest problems. At the close of the school year thousands of strong, energetic boys are turned loose in this city without anything to do and many of them fall into evil acts merely from lack of better occupation of their time.

Mr. McKeever thinks that:

Our school system is wrong in that it enforces too much discipline of one kind for a term of months and then too little of any kind for another term. Vacations should be brief. Only a week or two in length, and throughout the school year there should be fewer hours in the school room and these should be alternated with juvenile industry as well as play.

Singularly enough we must look to the Industrial Schools (once called Reform Schools), where boys and girls are detained by authority of law, in order to find about the only example of what may be achieved by means of scientific occupation of the time of boys and girls. Here we observe a schedule of work and play and recreation which, if made a strict requirement of all the boys and girls of the country, would bring well-nigh startling results by way of eliminating crime and debauchery and by way of transforming society as a whole.

To quote from a superintendent of one of these schools:

We hold them strictly and regularly to the performance of a reasonable amount and a variety of work throughout the year, but along with it they are required to carry their school course, and they are also given much time and liberty for play and recreation. You may be somewhat surprised to learn that our boys become much interested in this institution, finally regarding it as their home and their best friend. They also become so thoroughly habituated to work as to be self-reliant, and when they are sent out into the world they never lack for something to do.

¹ Home Training Bulletins. William McKeever, University of Kansas, Lawrence, Kansas. Price 2 cents each; \$1 per hundred.

HOUSEKEEPERS' DEPARTMENT

A COÖPERATIVE KITCHEN THAT IS MEETING A NEED IN ITS COMMUNITY

CHARLOTTE TALLEY

Investigation shows that a surprising number of community kitchens have been in operation at different times in this country and abroad. Very few of these ventures, however, seem to have been successful; a kitchen in Carthage, Missouri, was in operation for $3\frac{1}{2}$ years, another in Evanston, Illinois for 4 years. According to one plan in England, food was sent to the kitchen from the homes, cooked and returned. In some cases there is a community dining room, but in others meals are delivered. The ideal plan for such a community kitchen has not yet evolved, but there seems to be no question as to the need for it in certain communities.

A coöperative kitchen which has been operating for some months in a suburban town and which has now "broken even," has been improved in two important ways on the plans of other kitchens: by the selection of a food carrier and by catering to individual requirements in food whenever this is possible.

The plan for this kitchen took two years to develop. Similar enterprises were carefully studied, and families troubled with the servant problem were conferred with and their coöperation secured. A society was then organized and the directors decided that at least \$1000 should be raised by stock subscription before they would make even a modest beginning. Owing to pressure brought to bear by the stockholders, however, when \$900 had been subscribed, 90 persons having taken 1 share each, the kitchen was inaugurated.

Half of a double house was rented in a central location and two light rooms on the first floor were converted into dining rooms. These were furnished with small tables and attractively arranged as to table appointments, etc.; the silver and china which were provided were of fine quality, and dainty paper doilies and napkins were obtained to take the place of linen. The kitchen, also on the first

floor, was simply equipped; and the storeroom and laundry facilities were arranged for in the basement. The plant cost \$500, which was the amount paid in on stock before the kitchen opened.

From the beginning the kitchen has had as much patronage as could be handled properly and this has steadily grown. Meals are served at the association dining room and are also sent out by hired automobile; maids are sometimes sent to serve in the homes and catering is done for entertainments. Prices for meals are as follows: to subscribers, breakfast \$.25, luncheon \$.35, dinner \$.50. To non-subscribers: breakfast \$.35, luncheon \$.45, dinner \$.65. A fee of \$.10 is charged for each delivery.

The delivery of hot meals is a difficult task because great care is necessary in filling the containers quickly, yet in proper proportion, and with two automobiles going in different directions, it takes about $1\frac{1}{2}$ hours to deliver the dinners. The principal food-carrier is a Swedish container, consisting of a tier of enamel or aluminum dishes, which fit snugly into an ice cream container. In this way the food keeps hot for several hours. Soup, meat, vegetables, salad and dessert are sent out for dinner in this manner, with the cold dishes placed in a separate container.

All the food that is prepared at the kitchen is well cooked and of the best quality. Fancy dishes are often prepared at the kitchen for special occasions. Large dinners are sometimes served for organizations; three of these netted the kitchen \$50 each in one week. Part of the food served was cooked at the kitchen and part was prepared where the dinner was given.

There are at present five workers at the kitchen, a manager, an assistant manager, a cook, butler and waitress; this is a small number considering the character and amount of work done.

Since the kitchen is now operating without any loss, undoubtedly if it had a working capital it would make a profit, since the lack of this necessitates much buying at retail. Thirty dollars a month could be saved by wholesale buying of all foodstuffs. Another saving in the running expenses would be assured by the purchase of an automobile.

The receipts and disbursements for one week were practically equal, exclusive of those for catering service, which is irregular and uncertain. The figures are as follows:

	<i>Disbursements</i>
Wages.....	\$33.00
Rent.....	12.50
Fuel and light.....	5.00
Provisions.....	70.00
Delivery.....	7.50
Advertising.....	1.40
Telephone.....	0.90
Paper doilies and napkins.....	1.00
Total.....	\$131.30

A total of 420 persons were served during that week. This number divided into \$131.30 equals \$.31, the cost per capita. Receipts for the week were \$132.

The company is now incorporated. A cash dividend of 6 per cent per annum will be paid to shareholders when this is possible, and any surplus will be used to reduce the cost of operation and the price of meals to stockholders.

The demand for meals to be sent to the homes is increasing, although only a few families have three meals per day sent regularly. Meals are generally ordered when one servant is temporarily lacking in a household or on maids' days out. Sundays and Thursdays are the heaviest days, and as many as 58 dinners have been served on Sundays, with 11 orders refused.

Thus the need of such service in this particular community is being demonstrated, and if the kitchen were properly financed, as the Directors expect that it will be soon, more workers would be employed and the business could then be conducted on a larger scale.

PRESSURE COOKER VERSUS FIRELESS COOKER FOR HOME USE

GRACE GORDON HOOD

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Why should the modern household more than the modern factory reject a tool of value? This question might well be asked concerning pressure cookers. One type of pressure cooker consists of an aluminum kettle which is provided with a rack cover to hold food and with an aluminum cover, fitted with a pet-cock, safety-valve, and steam gauge; the cover can be clamped tight to the kettle by means of copper bolts. A pressure cooker is not dangerous if the valves are

kept clean, if a reasonable amount of water is used, if the safety-valve is in order, and if the fire is turned low enough to keep the pointer so that it indicates not more than 20 pounds pressure. The first three prerequisites can be insured by following the directions; the last comes with a little practice in regulating the fire beneath the kettle.

The fireless cooker has been very popular in many homes for some time as a fuel saver and a labor saving device. What of the pressure cooker? How do these two household appliances compare, first, as to initial cost; second, durability, sanitation, and ease of manipulation; third, cost of operating, efficiency and scope of use; fourth, palatability and digestibility of the food when cooked; and finally, which is the greater labor saver?

The initial cost of a fireless cooker would depend, first, on the size of the cooker; second, on the materials used in construction; third, on the means of applying heat. There is, so far as I know, no fireless cooker on the market that will produce any great variety of baked products equal in all respects to those baked in an ordinary oven which has been properly regulated. In the first place, it requires almost as much fuel to heat the plates for the cooker, as to bake the products in the oven. Second, the heat can not be regulated; in many cases the temperature is too great at first, and too low at the end of the baking process, the result being, in the case of a loaf cake, a rather heavy product, cracked, with hard upper crust, and sometimes with a slightly burned lower crust. Third, few of the cookers with a baking compartment provide for the escape of excess steam, the result being, in roasted meat, for example, a product which resembles braised or stewed meat, both in flavor and appearance. Therefore, let us compare the pressure cooker with a fireless cooker which is used only for food cooked by steam or hot liquid, and has only one cooking compartment as has the fireless cooker. The average initial cost of a pressure cooker, family size, is fourteen dollars. A fireless cooker may be had for from five dollars to fifteen dollars, the price varying according to the factors previously mentioned.

There is no question about the durability of the walls and cover of the pressure cooker, as copper and aluminum are both exceedingly durable. The glass cover on the steam gauge might break, or the spring for the safety-valve lose its strength, but both can be replaced for a small cost. On the other hand, unless the fireless cooker is lined with aluminum, and of course aluminum is to be preferred because it retains heat longer than do other common wares, it will rust in time;

unless the receptacle for food is made of aluminum it may rust or chip. An efficient metal-lined fireless is usually provided with plates to be heated. Soap-stone will break easily, iron will rust eventually.

The pressure cooker by virtue of its round bottom is sanitary, as it thus has no corners nor crevices, and can be thoroughly cleaned. It is hard to keep the compartment of the average fireless cooker as clean as it should be kept, even with a metal lining, because of the seams and the shape of the opening. As for the ease of manipulation, the average fireless cooker requires the following steps: the liquid in which the food is to be cooked, sometimes the food itself, must be heated, and the plates heated, the plates and food are then placed in the cooker and left for several hours. Frequently, if the food is to be served hot, it must be reheated before serving. With the pressure cooker the process is as follows: the water is added and placed with the kettle over the fire, the safety-valve and pet-cock are adjusted in about one minute, and the copper bolts tightened in from two to three minutes; it requires on the average about eight minutes to run the steam to pressure, with a moderate gas flame, after which the fire is turned very low during the remainder of the cooking process. The cook needs to glance at the dial occasionally for safety's sake, but as the longest time for cooking under pressure is generally not much more than one hour, and ordinarily less, she would probably be busy at the time preparing the remainder of the meal. Large quantities of the tough cuts of meat and other foods which usually require long cooking can be prepared in a period of two hours or less. When the food is cooked, the steam is allowed to escape by opening the pet-cock, then the bolts are loosened and the food served hot from the kettle.

In a series of experiments in laboratory and kitchen the following comparisons were made with the accompanying results. Various boiled, steamed, and stewed foods were cooked, first, with a gas stove of a usual household type; second, in a hot plate fireless cooker; and third, in a pressure cooker. The fuel used in every case was gas, the amount used was carefully measured by a meter which recorded the amount of gas consumed to the tenth of a cubic foot, and the cost was calculated on the basis of the local price for gas. In every case, cooking with the fireless and pressure cookers consumed less fuel than cooking with average care under ordinary conditions. The pressure cooker required, on the average, about one-half as much fuel for the entire time of cooking as was necessary to heat the plate for efficient

work in the fireless cooker. Cereals, meats of all kinds, vegetables, fresh and dried fruits, and steamed puddings formed the basis of typical dishes prepared. In every case the food might be called thoroughly done. Navy beans, for example, which required several hours over the fire or in the fireless cooker, cooked well in the pressure cooker in from twenty to twenty-five minutes after being soaked in the usual manner.

In regard to palatability. In the case of almost every food cooked either by pressure or fireless methods, there was an indescribable "closed-up taste," less in the pressure cooked meat perhaps, but still different from that of food which has been cooked in a vessel which allows some ventilation during the cooking process. This peculiar closed-up odor in the pressure cooker and the fireless disappears after the vessel has been open a few minutes. The taste is not objectionable to any great degree, except in the case of strong seasonings, such as bay-leaf and the strong-juiced vegetables, cabbage, onions, etc. Parts of the same cabbages were cooked in the three ways; the pieces from the fireless and pressure cookers had turned a dark unpleasant color, the pieces from the ventilated sauce pan retained much of their natural color.

Meats from the fireless, and from the ordinary gas stove had a "boiled look," and a comparatively flat flavor, although in every case the meat was seared in a dry pan with a definitely measured amount of fat before adding the water. The pressure cooked meat had a delicious flavor, more like that of an oven cooked roast, and a savory gravy resulted. More gravy resulted than the amount of water added could have supplied, still the meat was not tasteless nor dry. Does this seem to contradict our usual rules for protein cookery? To be sure a maximum thermometer in the cooker registered 125°C (which is about what it should have registered at that pressure), but the meat was more tender than parts of the same piece cooked by the other two methods. A laboratory experiment in digestibility, although hardly accurate enough to quote, seemed to indicate that, *in vitro*, the pressure cooked meat was as readily digested as the other two, if not more readily. Perhaps the statement made by Sherman¹ will explain this result; he says, "At sufficiently high temperature, however, protein undergoes in water alone a change similar to that of peptic digestion."

¹ Chemistry of Food and Nutrition. By H. C. Sherman, 1911, p. 46.

Cereals cooked in the fireless cooker are compact, firm and solid, and lack in flavor, this is not true of cereals cooked in the pressure cooker or over the fire; they have a nutty flavor, and are light and fluffy in texture. Old-fashioned rice pudding and Indian pudding which require a great deal of gas are not a success when cooked in the pressure or the fireless cooker; in the first place there is less evaporation, and so less milk is absorbed and the products lack richness. The fireless cooker does not develop the caramel flavor, in fact, long, slow cooking does not tend to develop the pleasing flavors which are often produced at higher temperature.

Steamed puddings and similar products cooked in the pressure cooker in about one-third of the time required for those cooked in the usual way. The product was acceptable, but not as good as parts of the same mixtures cooked in the fireless cooker, or in the usual way; probably the high temperature hardened the exterior of the mixture before it had risen sufficiently; at least from inspection it appeared so. However, large sized puddings cooked in the fireless cooker are often heavy, wet and soggy, and sometimes underdone, owing no doubt to the fact that the temperature does not remain high a sufficient length of time to complete the cooking process.

On the whole the pressure cooker seems to be a greater labor saver than the fireless cooker. Both require some experimenting and slight changes of technique from that used in the usual cooking processes. The average housewife could learn to operate a pressure cooker with ease and without danger, but the fireless cooker is better to put into the hands of the average kitchen employe. The initial cost of a pressure cooker would soon be covered by fuel saved.

THE CENSUS "DEPENDENTS"

The Philadelphia *North American* makes this interesting comment on the United States Census report on occupations.

It is found that in 93½ per cent of American homes no servants are employed. Of the nearly 17,000,000 families in the United States, only 1,000,000 can afford to keep servants. This is a conservative estimate, since some fortunate housewives employ two or more servants.

Probably where five well-to-do families are able to afford a servant, in ninety-five homes mother does all the housework. Yet, under the law, she is not classed among the workers, but swells the list of dependents.

CLEAN FOOD A POSSIBILITY¹

Under the caption "Brains and Buying," the Chairman of the Food Sanitation Committee of the General Federation of Women's Clubs has some very pertinent things to say to the housewives who are the purchasers of ninety-five per cent of the food supply. She is right, food inspectors are necessary to invoke the majesty of the law occasionally, but women who use "brains in buying" have, after all, the remedy for unclean shops at their command. She says:

Since the housewife usually does the buying for the family, it naturally follows that the housewife controls the market, not only the kinds of products sold but the kind of selling place. *Whenever the housewife ceases to buy from the dirty food shop, the dirty food shop will cease to exist.*

Every club woman knows the importance of good food and the danger that always lurks in impure or carelessly handled food. In these days we are not willing that only the fit shall survive, but are cutting down the death rate and making many abnormal children normal. In this work, nothing is more important than the wise selection of food. Let us select with as much care the materials that are to make brain and sinew as the materials that are to make our clothing. Can we ask for more privileges and authority unless we use the power that has been in woman's hand for ages, the power that lies in intelligent buying? We need pure food laws and market inspection. As women are the housekeepers of the world, they make the best food shop housekeepers, that is, local market inspectors. But with perfect laws and expert inspection, if women buy dirty food the merchant will find a way to evade the law and dodge the inspector. The impure milk, the unwrapped bread, the infected meat, and fly-contaminated food of all kinds will be sold to careless housekeepers. The most important thing for every community to do is to decide that it will have no more dirty food. The flies must go, the filthy milking shed must go, the food shops must be clean and sanitary, the people who handle the food must be healthy and clean. You can readily see that the success of this sort of campaign depends on numbers. A merchant studies his market. If clean food is called for, he will furnish it. If the food shops are not right, it is the fault of the careless buyers.

To my mind, this better buying campaign can best be managed by fitting your work to local conditions. If you have an active civic organization, club, congress, or city federation, do the work through them. If

¹ Monthly Bulletin, Indiana State Board of Health, 17 (1914), No. 3, pp. 29, 30.

you have none, organize one. In any case, district the town and hold district meetings, in the school houses if possible, getting all the mothers out. Have occasionally a mass meeting when your state or local health officers will give you inspiring and helpful talks. Never make the mistake of fighting the local health officials. Help them and ask them to help in your work. Have instructions to mothers a part of the district meeting. Do not be afraid of opening the doors of your organization wide. Remember our work of bettering humanity will be most effective when we are in touch with those whose needs are greatest.

JAVA COFFEE HEARING

A public hearing on the labeling of East Indian coffees was held by the Bureau of Chemistry, of the United States Department of Agriculture, on June 4. The particular point to be discussed was the use of the term "Java." Food Inspection Decision 82 holds that under the food and drugs act the term "Java" can be properly applied only to coffee grown on the island of Java. Representatives of the trade, however, assert that coffee grown on the island of Sumatra, is superior to much of that produced in Java, and that since the public has long considered the word "Java" to mean any high grade coffee from the East Indies, it is perfectly proper to apply it to the Sumatra product also.

TRY COTTONSEED OIL

The European war, according to specialists in the United States Department of Agriculture, affords the American housewife an opportunity to become better acquainted with a very useful native product. "In the year ending June 30, 1913, nearly \$40,000,000 worth of cottonseed products was shipped to Europe in the form of cottonseed meal, and oils and fats used for cooking and domestic purposes. The latter class of products must now, to a great extent at least, be consumed in this country or not at all.

"Hitherto there has been a widespread belief that cottonseed oil was used chiefly to counterfeit or imitate olive oil. This has resulted in a prejudice which has done much to prevent cottonseed oil from being judged on its own merits; it is fully as nutritive as olive oil, and, on account of its bland flavor, is actually preferred by many who have never learned to like olive oil. It lacks, of

course, the distinctive olive flavor which many persons find desirable. Italians, indeed, are frequently not satisfied with the flavor of the highest grade virgin olive oil, but prefer the thicker, darker, fruitier product derived from a second pressing.

"Improvements in the process of manufacture have resulted in making the modern cottonseed table product very different today from that of even a few years ago." Those whose decisions against it is not very recent are urged to try it again. Its lack of flavor lends itself to the use of condiments. A very satisfactory oil can be made by the housewife by mixing olive oil and cottonseed oil as suggested by Mr. Snyder in the March JOURNAL, page 154.

The difference in price between the two oils has always been great. It promises now to be greater than ever. Aside from the small bottles called salad oil, whose price is as variable as the labels, the price in groceries for standard "cooking oils" made from cottonseed is about 25 cents a quart. This seems to be a fair retail charge as we find on inquiry of the Office of Markets, United States Department of Agriculture that *prime* winter yellow and summer white cottonseed oil are quoted at $53\frac{1}{4}$ cents per gallon in hundred barrel or carload lots. The various brands of cottonseed cooking oil as put on the market by the different manufacturers are made with these refined oils as a base with very little added expense.

STAIN REMOVAL¹

<i>Character of Stain</i>	<i>Reagent</i>	<i>Method of Removing</i>
Fruit	Boiling water.	Spread stained part over a bowl, pour boiling water on it from a height so as to strike the stain with force.
	Borax.	Borax will assist in removing stubborn stains.
	Javelle (for cottons and linens)	Use Javelle solution and boiling water in equal quantities and immerse stained portion, allowing it to soak a few minutes, then rinse thoroughly with boiling water. This is best for peach stains, if alcohol fails.
	Borax and ammonia (for woollens, silks and colors)	Borax and ammonia used instead of Javelle which destroys these fabrics and colors.
	Oxalic acid	Apply a few drops of oxalic. Rinse well with hot water.

¹ From Laundering. By L. Ray Balderston, 1914, pp. 43-51.

<i>Character of Stain</i>	<i>Reagent</i>	<i>Method of Removing</i>
Grass	Cold water (without soap)	Wash a fresh stain with cold water.
	Molasses	Rub with molasses, let stand a few minutes. Wash out in warm water.
	Alcohol } Ether }	Alcohol or ether will dissolve the green coloring matter, when material cannot be washed.
Grease (oil)	Warm water and soap	Wash in warm water and soap.
	Javelle (for white cottons and linens)	Remove traces of grease stains by bleaching with Javelle.
	Ether } Alcohol } Benzine }	Apply these reagents with a cloth, preferably of the same material, rubbing the stain lightly, until all the reagent has evaporated. (These reagents are inflammable.)
	Acetone } Benzol }	Apply as above.
	Fuller's earth or chalk	This may be used without fear of water rings appearing, or of changing color. Apply the powder to the stain and let stand several hours, then brush off lightly.
Machine oil	Cold water and soap	Wash in soap and cold water.
	Turpentine	Rub stain with turpentine.
Mildew	Cold water	If the mildew is very fresh, and has not attacked the fiber, it will wash out in cold water.
	Potassium permanganate and oxalic acid (cotton and linen)	Apply potassium permanganate, then wash with warm water, use oxalic acid and then wash.
	Javelle (cotton and linen)	Apply Javelle, then wash with hot water.
Perspiration	Soap and water (for white washables)	Wash in warm water and soap, and if cotton or linen, place in sun to dry.
	Javelle water (for cottons and linens)	Use according to directions on white goods given above.
	Sodium hydrosulphite (for silks and wools)	Apply a dilute solution of sodium hydrosulphite and wash in water.
	Potassium permanganate and oxalic acid	NOTE.—To remove perspiration stains from colored goods with anything other than soap and water, means, in most cases, removing color. Re-dyeing is the final remedy. The odor may be removed by chloroform.
Scorch	Sunlight (for cottons and linens only)	Use as for mildew.
	Soap and water	Hang in sunlight, and slight scorch will be removed.
		Wash in soap and water and place in sun.
		NOTE.—Scorch on woolens and silks means the fiber is destroyed.
Shoe polish:		
Black paste	Lard or grease	Rub in well, then wash in warm water with soap.
Bronze	Hydrochloric acid and ammonia	Use acid and ammonia alternately. Wash with soap and warm water.
Tan	Oxalic acid and ammonia	Use oxalic acid and ammonia alternately. Then wash with soap and warm water.

MODEL KITCHEN TO ILLUSTRATE PRINCIPLES¹

A complete kitchen with a real stove, refrigerator, sink, work-table and other necessities was sent by the Office of Home Economics of the Department of Agriculture States Relations Service to San Francisco for the fair. This kitchen is not a "model" in the sense that every housewife is to try to make hers as nearly like it as possible, but is rather a composite of many possible model kitchens which is designed to illustrate various essential principles of convenient kitchen arrangement.

One general idea emphasized by this kitchen is that the size of the ordinary kitchen should be small rather than large if the room is to be used only for the preparation of the meals. It should be as compact as possible to save traveling back and forth. The stove, table, and sink should be as near together as is convenient, and the distances to supplies and to the dining room or pantry should be short. On the floor of the model room the distances most commonly traveled in preparing and serving meals are indicated by straight lines.

"The fewer ornaments the better in a housewife's workshop" is the text of another lesson of this little exhibit. Corners are rounded; surfaces are plain; there are few moldings to catch dirt which must be removed with so much effort. One feature is a table with legs that may be raised or lowered to suit the height of the worker.

The refrigerator, as it stands, is a composite illustrating several kinds. The advantages and disadvantages of each particular lining are explained in labels attached.

A stew kettle is shown in several common materials in the model kitchen, but no particular make is recommended. The aim is to show sauce pans or kettles made of steel, aluminum, enamelware, copper, and earthenware, and descriptive labels explain how each material excels in its own way, and what are its disadvantages.

Samples are shown of the more common floor coverings and wall finishes, with labels setting forth the relative merits and drawbacks of each. Linoleum and oil cloth have their strong points, and so have tinted, painted and undressed wall surfaces. Varnished wall paper is good for some purposes, and unvarnished for others.

¹ Office of Information, U. S. Department of Agriculture.

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Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS if the Journal price is listed.

The Family and Society. By JOHN M. GILLETTE. Chicago: A. C. McClurg and Company, 1914, pp. 164. \$0.50.

This little book, which is one of the *National Social Science Series* edited by Frank L. McVey, Ph.D., President of the University of North Dakota, is an attempt to furnish the reader, within brief compass, some knowledge concerning the history and present conditions of the family as a social institution. The opening chapter discusses The Functions of the Family in its relation to the social group and seeks to make plain why the monogamic family "is the best agency to renew society" This appears to the critic to be the best chapter of the book. Then follow discussions of the Origin of the Family and the Evolution of the Family in which the various forms of family organization, polygamous, polyandrous and monogamous, are briefly sketched with the causes which operated to produce them. The reader is then somewhat abruptly introduced to a consideration of Current Conditions Affecting the Family. The problems of divorce, the declining birth-rate, the postponement of marriage, the social evil, all receive frank and on the whole accurate treatment so far as space permits. Finally, there comes a chapter on the Biological Phases of Sex which would logically seem to belong at the beginning rather than at the close of the work. But the author here raises the question whether or not "the family is a purely biological matter, whether it has arisen solely for the convenience of the mating of the sexes, or whether it has other promoting causes." And he feels that the earlier chapters of his book "furnish data for arriving at a conclusion relative to this question," although, curiously enough, this material is not drawn upon. Instead the reader is introduced to the views of Geddes and Thomson, Lester F. Ward, Davenport and others concerning the origin and function of sex, the nature of sex differences and the question of sex determination.

This would seem to be a sufficiently comprehensive program. But when it is understood that these important and difficult themes are disposed of within the limits of a small, duodecimo volume of 155 pages, the critic may well ask himself whether such a work does not ruthlessly sacrifice thoroughness to comprehensiveness.

A good feature of the book is its attempt to give a solution for each of the evils attacking modern family life—but here again the brevity of treatment militates against the force of the statements. The wisdom of confidently presenting figures concerning the prevalence of the social evil and of the diseases which it spreads may well be questioned in view of the fact that the leaders in the social hygiene movement are themselves already skeptical concerning not only the accuracy of these figures but their curative value.

Perhaps the above criticism has made clear enough the conviction of the critic that Dr. Gillette's book, although readable and interesting in parts, is hardly a satisfactory discussion of a very large, complex, and difficult subject. It can hardly do more than serve as an introduction to a more thorough study.

Women Workers in Seven Professions. A survey of their economic conditions and prospects. Edited for the Studies Committee of the Fabian Women's Group. By EDITH J. MORLEY. London: George Routledge and Sons, Limited; New York: E. P. Dutton and Company, 1914, pp. 318. \$2.

This volume is the outgrowth of lectures and discussions by English women engaged in the professions described and is part of an organized attempt to set forth the present economic condition of women in England. The professions discussed are teaching, medicine (including surgery and dentistry), nursing (including midwifery and massage), the work of sanitary inspectors and health visitors, of women in the civil service, as clerks and secretaries, and on the stage. Numerically, the teaching profession is the most important and the section devoted to it contains various subdivisions on work in different grades of institutions and on special work in gymnastics and domestic subjects. The last topic covers 17 pages which give much specific information regarding the present attitude of the public toward the subject, the training offered by different schools, and the positions and salaries available to trained workers in this field. The introduction of the Home Economics subjects into the school and especially into the university curriculum has been slow in England as in this country, slower perhaps because the entire system of education for girls and women is less developed there than here. Various polytechnic and teachers' training schools (corresponding to our technical and normal schools) offer two or three year courses, but the study of the specific scientific problems related to the home and the correlation of these to general social and economic problems receive even less attention in institutions of university grade than in this country. King's College for Women, London University, is the only one which so far has introduced a course planned distinctly

along these lines. The three years' work there offered consists mainly of the usual academic courses in science, but during the third year these are directed to the study of food, cooking utensils, cleansing agents, textiles, household bacteriology, etc. One day a week throughout the course is devoted to practical work in cooking and housewifery. Two years' study of ordinary economics is required and also one year in the economics of the household. Students are encouraged to remain for a fourth year of special work. Like corresponding courses in this country, this innovation is subjected to double criticism; on the one hand, the science is called too elementary, and on the other, the practical work is considered insufficient. It is believed, however, that it will prove well-adapted to the present requirements for teachers. The better positions now call for more scientific training than is given by most schools of domestic arts, and more practical skill than can be obtained by the ordinary university science courses.

One of the chief difficulties with this branch of teaching at present is the lack of uniform requirements in different schools, but it is believed that this will adjust itself in time, particularly with an increased number of teachers trained to understand the relations of the practical to the scientific and economic aspects of the subject. The salaries paid to teachers of domestic arts are similar to those in other lines of teaching; all of them run lower than corresponding ones in this country.

Journal for Housewives and Woman's Life. A. Gobenoff, Editor. A Russian journal devoted to women's interests.

Further proof of how wide-spread is the present interest in questions of Home Economics is given by this Russian periodical. It is published every other week, sells for fifteen kopecks (about nine cents) a copy, and is said to have a large circulation. It includes practical articles and suggestions on all phases of home life, such as hygiene, education of children, cooking, garment making, embroidery, etc., and a more abstract section in which books are reviewed and various matters of interest to women and their position in society are commented on. Its supplements include such things as paper patterns, blanks for household book-keeping, translations from the well-known French women's paper *Femina*, and monthly booklet of stories, pictures, plays, etc., for children of different ages.

Sunday Evenings at Catherine's (Chez Catherine Ménagère). By A. VINCENT AND Mlle. BAT. Paris: Librairie Hachette et Cie, 1914, pp. v + 313, figs. 300.

This book, which belongs to Hachette's School and Family Library series and which is intended for French school-girls and housekeepers, is a col-

lection of useful facts held together by a very slender thread of fiction. Catherine, the owner and keeper of a prosperous farm, is described as gathering her neighbors together at her house on Sunday evenings and persuading the village school mistress, the local doctor, or the mayor of the commune to give them simple talks about house furnishings, foods, hygiene, the care of babies, home and public sanitation, etc. Some of the theories advanced might not be considered indisputable in all scientific circles and the chapter on alcoholic beverages smacks a little of the over-ardent reformer, especially if judged by its illustrations of diseased organs and drinking bouts. But on the whole, the book contains a large amount of useful information presented in a readable and systematic way and discussed with more common sense and practical understanding of rural conditions than one ordinarily meets in print. Incidentally, it gives what to the foreigner are interesting details of how laundry work is done on a French farm, what are considered progressive arrangements for the bath-room in a house where there is no running water, what kinds of pots and pans are held to be indispensable, how a French baby is dressed and cared for, etc. Compared with the pictures in most American books of similar purpose, the quality of some of those here given seems rather crude, but they at least have the virtue of illustrating more accurately than do some more decorative ones.

Financing the Wage-Earner's Family. By SCOTT NEARING. New York: B. W. Huebsch, 1913, pp. 171, figs. 8. \$1.25. Bymail of the Journal, \$1.35.

This book is an attempt to bring into comparison available figures upon the incomes of wage-earners in the United States and reliable estimates of the cost of maintaining a fair standard of living.

In the matter of the cost of living, the writer estimates that between \$450 and \$650, according to locality, is necessary to maintain a minimum standard for an average family consisting of father, mother, and 3 children under 14. This provides only for the barest necessities—food, clothing, and shelter—and not for school books nor for the expenses attending illness or death.

The cost of a fair standard of living is estimated to be from \$700 to \$750 for a family of average size, in the individual towns of eastern United States, and \$100 more in cities—significant figures from the writer's point of view, since he estimates that three-fourths of the males in the United States are earning less than that amount.

The author urges that local comparisons between wages and the cost of living be made, and for those who wish to undertake such studies his book with its ample bibliographical notes will serve as a guide.

The Annual Report of the Federal Council of the Churches of Christ in America for 1914, issued by the National Office at 105 East 22d Street, New York City, contains a special report of the Commission on family life on "the lax relations of the church and home." It criticizes the church for the limited influence it exerts over family life. It speaks of the lack of religious unity often present in the modern American family by which members of the family attend different churches according to their individual choice; it deprecates the modern lack of authority in the home, and the fact that the church has failed to hold heads of families to strict observance of their duty towards the family in respect to religion. It urges that ministers in solemnizing marriages should urge the parties to emphasize religion in the home life, and the responsibilities of parents for the religious instruction of children, and the "important offices of religion in the home, as saying grace at meals, the performance of the family worship, and the quiet instruction of children in the fundamental truth of religion." "The church must have the family if it is to have the world."

The History of the Dwelling-House and Its Future. By R. E. THOMPSON. Philadelphia and London: J. B. Lippincott Company, 1914, pp 172. \$1. By mail of the Journal, \$1.08.

This little book surveys briefly the development of the house from the primitive tree house and cave dwelling to the modern types, and forecasts possible future developments in the constructions of dwellings, sanitary systems and streets, and in coöperative arrangements for household tasks. The most unusual part of the discussion is perhaps that which deals with the old hall (skali) of the Scandinavian races. This has recently been studied by Norwegian ethnologists from whose writings the author draws much of his material. It may be questioned whether this Scandinavian form of dwelling affected the development of the house among the peoples of western Europe as much as the author believes. Nevertheless, his discussion of it is interesting and is especially valuable because so little has been written on this particular phase of the subject in the standard English books on the history of dwellings.

The Lighting Book. By F. LAURENT GODINEZ. New York: McBride, Nast and Company, 1913, pp. 109. \$1.25. By mail of the Journal, \$1.35.

Here we have a successful effort to treat an important but rarely discussed subject from a non-technical viewpoint. The layman in reading these few pages is given a new appreciation of artistic lighting effects—and more, suggestions for making domestic improvements in an inexpensive way.

The author truly accomplishes his purpose to bring "home . . . a greater appreciation for those comforts and pleasures which artificial light has to bestow."

Emphasis is laid upon the value of indirect lighting with opaque reflectors, of inclosing globes of opaque glass, and of amber gelatine films for subduing the glare of the modern incandescent bulb and gas mantle. The half-tone prints and line diagrams, showing the comparative lighting effects of various types of inclosing shades and reflectors in reference to shape, size and material, bespeak a careful selection on the part of the author.

Toward the close of the discussion, in the chapter entitled *Light in the Home*, a summary of the many suggestions and corrections treated consists in a trip through the home "applying our knowledge of lighting technique wherever it can serve us best in creating an atmosphere of attraction and repose."

How to Save Money. By N. C. FOWLER, JR. 2d edition. Chicago: A. C. McClurg and Company, 1912, pp. 282. \$1.

This book will be a distinct help to teachers of the household budget who are interested in the saving and investment factor in household finance. The introductory chapters urging the need of saving may be a little extreme, but the individual chapters dealing with insurance bonds, mortgages, stocks, banks, etc., give useful concrete material.

Students' Accounts. By Edith C. Fleming. Ithaca, N. Y.: Dept. of Home Economics (Cornell University), 1913. \$0.50. By mail of the Journal, \$0.54.

An account book with pages ruled for bank account, receipts and expenditures with the following subdivision of expenditures—board, lodging, fees-dues, books, transportation, clothing, laundry, medicine, toilet articles, outside interests, sundry items.

Household Accounts. By Edith C. Fleming. Ithaca, N. Y.: Dept. of Home Economics (Cornell University), 1914. \$0.75. By mail of the Journal, \$0.85.

An account book with pages ruled for bank, cash, produce and charge accounts and expenditures with the following subdivisions of expenditures—shelter, food, clothing, and miscellaneous, space being allowed in each of these for further subdivision.

NEWS FROM THE FIELD

National Conference of Charities at Baltimore. The key-note of the conference was struck by Mrs. Glenn in the presidential address, *A Prelude to Peace*. She did not talk war issues; she did not even try to foretell its time of closing or its after effects. Her theme was this: that whatever the causes and whatever the obvious results, it is our business as social workers and as Americans to be ready to offer to Europe the real sources of strength for recuperation. These sources of strength lie in the restoration of normal family life, in the ability to return to the ordinary operations of daily business, in the education of the next generation for the big tasks before them, in the ability of the average man to stand up to the drudgery of the day's job and to retain his grip on the better things of life without the stimulus of brass bands and spectacular events, and in the readiness to sink differences and to forget them.

The Conference program sounded this note: that social workers are engaged in a war on destructive social conditions; that the general cause is bigger than the particular work of any organization or individual; that we must look at the field as a whole and work for the entire social program rather than for the pre-eminence of our own little function.

Social workers have learned to become strategists and to plan broadly for the future. This was shown in the discussions of the unemployment situation. Out of the turmoil of last winter, the inevitable disruption of regularity, and perhaps of standards, has come a planning for the future in a bigger way than ever before. Remedies were suggested for the industrial displacements of the present period and even for the displacement which will probably follow the close of the war, in an ascending scale, as follows: preparation for adequate relief, of course; public "made work;" coöperating national, state and city labor exchanges; dove-tailing of industries with alternating busy and dull seasons; regularization of industries within themselves; education of the market away from the vagaries of fashion and demand which make for rushes and lay-offs; illness insurance; unemployment insurance.

The breadth of planning which characterized the Conference was well shown in the state-wide program submitted by the committee on children. This advocated a state board with adequate provision by means of institutions and "out-patient" work for all four groups of unfortunate children, namely, dependents, delinquents, defectives and neglected.

Further suggestions toward a "community plan" of child protection embraced not only children who are dependent or delinquent or neglected, but all normal children below the poverty line. Proper infant care was urged as a necessary check on infant mortality. It was urged that nurses should be provided capable of giving scientific infant care and that the milk supply should be safeguarded.

The Baltimore exhibit especially prepared for this Conference threw much new light on this question of medical inspection. For instance, the exhibit made it clear that 70 per cent of the repetition of grades, common among school children in Baltimore, could be saved by closer attention to poor eye-sight, bad hearing, enlarged tonsils, malnutrition and nervous troubles. 40,000 children of this class are now neglected because of the inadequate school inspection force.

The importance of medical inspection among school boys, its relation to education, health and delinquency, may be judged from the very humane things done by the medical inspection department, in spite of its limitations. "The medical examiners inspect the children, assisted by the nurses, and the follow-up work is done by the nurses. They give health talks in the various classes; visit many of the homes, instructing mothers as to general health of children; give treatments in schools and do nursing in homes; and also take children to dispensaries for treatment when their parents are unable to do so." What community can afford to do less for its boys and girls?

Other helpful measures urged at the Conference were industrial training, agricultural revival, a constructive immigration policy, the further reduction in the number of child workers of the land, reduction of excessive working hours, and the constructive care of the unemployable.

The Conference was not without its lesson in humility. One speaker asserted that social work is not a profession; that the social worker is not so much an expert as he is an expert go-between to corral experts upon case problems. This criticism was wholesome, because it set a standard of professional training which, it is hoped, will become more and more recognized in the selection of workers in both private and public fields.

As a whole the Conference was best because of (1) the unity of its carefully planned program; (2) the emphasis on public responsibility; (3) the recognition on the part of the public group of the prime necessity of high standards of efficiency; (4) the attention given to broad community plans and preventive measures; (5) the sane conservatism of the remedies proposed; (6) the harmony of feeling among groups of workers; (7) and the indefinable inspirational quality of the whole thing which cannot be spread on paper and which cannot be realized unless one were there to feel it.

The forty-third Conference will meet at Indianapolis next year. Its

officers, as elected are: President, Rev. Father Francis H. Gavisk, member of the Board of State Charities, Indianapolis; First Vice-President, James F. Jackson, Cleveland; Second Vice-President, Dr. James T. Gilmour, Toronto; Third Vice-President, Miss Minnie F. Low, Chicago; General Secretary and Treasurer, William T. Cross, Chicago.

The Southern Mountain Workers Conference was held at Knoxville, Tennessee, April 20-22. John C. Campbell, of Asheville, North Carolina, Secretary of the Southern Highland Division, Russell Sage Foundation, was chairman. Among those present and taking part in the discussions were Commissioner of Education, P. P. Claxton, President and Mrs. W. G. Frost of Berea College, Kentucky, Miss Katherine Pettit, and the secretaries of the mission boards of many religious societies maintaining schools in the mountain district.

The tendency of all schools and settlements in the "South Atlantic Highland" is away from sectarianism, although they hold a high standard, meeting the religious nature of the people.

Agriculture and household arts adapted to the mountain conditions receive some attention in all these schools. Bulletin 595, U. S. Bureau of Education, pp. 84-93 gives a valuable chapter on Feasibility of Adapting the Folk Highland Schools to American Conditions.

Exhibit for Richards Memorial Fund. A contribution of \$25 to the Richards Memorial Fund was the result of an exhibit and sale in the Household Art department of the State Normal College, Ypsilanti, Michigan.

The exhibit included both modern and antique productions from the fingers of women, civilized and uncivilized. Baskets, pottery, leather articles, hand and machine weavings, needle work, old and new, in garments, embroideries, rare laces, and samplers. A fine collection of costumes dating back to the early 1800's was a much enjoyed feature. These were placed beside gowns made in the department displaying fashions not unlike parts of the earlier costumes.

Another feature of the exhibit was a wonderful collection of woven articles and baskets sent from Berea College, Kentucky. These represented the work of the women in mountain homes and stood well beside many articles from Colonial times which were on display.

The sale included afternoon tea, candy, table-decorations and favors; boutonnieres, and articles from the Berea exhibit.

The Household Arts department feel that the inspiration gained by the young women in the department as well as the worthy objects, the E. H. Richards' Fund, and the State Home Economics Association made the effort well worth while.

Michigan Home Economics Association. The Executive Committee of the State Home Economics Association met at the State Agricultural College, East Lansing, Michigan, on Saturday, April 24 to discuss the next annual meeting of the association. This will be held as a section of the State Teachers' Association at Saginaw the latter part of October. It was decided to take as our general subject, The relation of elementary and secondary education in Home Economics to that in the Normal Schools, Colleges, and Universities. Miss Abby L. Marlatt is to give the principal address of the meeting.

The Home Economics Association of Philadelphia. The Association worked out its winter plans with great success. The evening class in dietetics at Drexel Institute showed great interest and enthusiasm both by the attendance and the work done.

The last lecture on the Budget was postponed until April, in order that actual budgets might be collected by members of the class. Very complete schedules were printed in order to secure definite information from which a general budget could be made up. Work was done among families of moderate means and well-to-do incomes, as this field is one that has been neglected. We hope that this work may prove of definite value.

Miss Winslow's lecture classes on Nutrition were helpful for those who could not give the time to the laboratory work. The topics discussed were as follows, two being taken up in an evening: The fuel value of foods as expressed in calories; The fuel requirements of individuals; The fats and carbohydrates in food and their digestion; The various proteins and their relative values; The ash constituents in our food and their utilization in the body; Metabolism; The food requirements of infants and young children; The diet of school children; The food requirement of adults; Diets in diseases.

Mississippi Home Economics Association. The work of this Association since the 1914 meeting has been the preparation of a syllabus on Home Economics to be used in the public schools of the state. It is now ready for publication, having been delayed by certain changes found advisable by the committee in charge of the work.

The 1915 meeting was held at the Industrial Institute and College, Columbus, March 4-7. The first session was given to a consideration of recent progress in the home—especially in the Mississippi home. In the other sessions, lectures, five minute talks and discussions centered about home industries, home sanitation, home furnishing, and the social activities of the home and community.

Home Economics Day. The Home Economics Department of the North Dakota State Agricultural College observed Thursday, December 3, 1914, as Memorial Day for Mrs. Ellen H. Richards. At the suggestion of Miss Stoner, Dean of the Department, the faculty granted the young women of the college a half holiday. All laboratories, lecture and class-rooms in Ceres Hall were opened to the faculty and students of the college and to the citizens of Fargo, North Dakota, and Moorhead, Minnesota. An interesting program was given to an appreciative audience in the Little Country Theatre, in the Administration Building. It consisted of music, quotations from the works of Ellen H. Richards, and talks on Xenophon, Katherine Beecher, Count Rumford, Ellen H. Richards and the memorial fund.

A large number of college people and citizens of Fargo and Moorehead attended the meeting and visited the Department to see the educational exhibits in the laboratories and other class rooms.

Miss Bessie E. Taylor, Instructor in Domestic Art, had charge of the textile, millinery and dressmaking exhibits in the domestic art rooms. Miss Stoner, Dean of the Department, and Miss Geraldine Hadley, Instructor in Domestic Science, were in charge of the exhibits in house-planning, household management, household budgets, dietetics, and food work.

Miss Iva Neumann, Instructor in Home Economics, assisted by young women in the high school and homemakers classes, was in charge of the Home Economics dining room, where dainty refreshments were served to all the visitors. The dining room was artistically decorated with flowers and ferns and the tea was served in Japanese style.

Contributions received on Home Economics Day and the donations from the Young Woman's Auxiliary Section of the Fine Arts Club, of which Miss Stoner is director, amounted to \$15.00 for the Memorial Fund.

The department is planning to have an exhibit next December in connection with the Home Economics Day Program.

Kansas Home Economics Association. The association is at work upon the formation of a unified course in Domestic Science and Art for use in the high schools throughout the state. This work has been put in charge of a standing committee whose chairman is Mrs. Mary Pierce VanZile, Dean of Home Economics, Kansas State Agricultural College, Manhattan, Kansas. It is hoped that the work will be completed before the next annual meeting.

A new line of work that has been started in the extension field is the "Dressmaking Schools." One of these "schools" has already been held in a county-seat town of 2000. The school covered a week, beginning each day at 9.00 and closing at 5.30 with a short intermission at noon time. It was self-supporting, the members each paying a sufficient fee to make it

so. The class was limited in number to thirty. The full number was enrolled and a list of seventy names was on the waiting list. In addition to attending lectures and witnessing demonstrations by the teachers each day each woman was allowed to bring material from her home and was aided in designing and making a dress for herself. Of course, all materials and kinds of costumes were represented. The school was in charge of Miss Frances Brown and Mrs. Bessie Birdsall, Professor of Domestic Art, and was under the auspices of the Kansas State Agricultural College through the Extension Division. The school was an unqualified success and the College hopes to hold many others along the same line in the future.

Alabama Home Economics Association. The Home Economics Conference held at the Alabama Girls Technical Institute, Montevallo, Alabama, January 28-30, resulted in a permanent organization to be known as the Alabama Home Economics Association. The office of this association will be at the Alabama Girls Technical Institute, Montevallo, Alabama.

Courses at Teachers College. A course in Accounting and Office Management for Institutions has been given at Teachers College under the direction of Prof. C. T. Macfarlane, who is controller for the College. This course includes the discussion of the making of budgets for institutions, and such topics as overhead expenses, etc., allied to this. It includes the preparation of statements and reports, and various systems used in efficient administration.

A revision of plans for practice work for students in the Institution Department of Teachers College has been made for next year. The course is to be called "Institutional Housekeeping" and includes four phases of field work:

(a) Observation in different types of institutions in the city, including hospitals, clubs, dormitories, Y. W. C. A., etc; (b) Practice work in the housekeeping departments of Whittier Hall; (c) Practical work in the Horace Mann Lunch Room and other cafeterias; (d) Field work in connection with the public school lunch rooms in New York City.

Besides this field work students have six other courses in Institution Management:

(a) Institution laundering; (b) Institution furnishings and supplies (rugs, bedding, linen, etc.); (c) Institution food departments; (d) Institution planning (dormitories and hospitals as types); (e) Institution accounting; (f) Principles of organization for institution homes.

A large number of graduate courses are offered now at Teachers College. These include a number for students wishing to do advanced work in administrative problems. They include investigations along economic lines;

advanced problems in accounting for institutions; and surveys, studies and work related to other specialized fields in administration. These may be taken in the form of a practicum, meeting with the instructor at stated times for discussion not in regular class room work.

Santa Barbara Normal School. The State Normal School of Manual Arts and Home Economics has a school year of fifty out of fifty-two weeks. No course is completed in less than ten months but arrangements are made to receive students in June, August, November, January and April. Admission is granted to both men and women who can meet the entrance requirements. The courses offered are: Home Economics, including domestic science and art, institution management, and dietetics for nurses; Applied Arts; Manual Arts; Industrial Arts; Physical Training. No tuition is charged but there is a nominal fee for laboratory and for materials.

The Normal School is also cooperating with the Bureau of Correspondence Instruction of the University of Washington to serve the homemakers of the State.

The building is unusual in its beauty and its interior arrangement. It is 200 feet square with cloisters 15 feet deep, rooms 30 feet wide, and court 95 by 120 feet.

For exterior view see frontispiece, and for style of architecture see page 345.

George Peabody College for Teachers. One of the most striking features of the work of the summer quarter at George Peabody College for Teachers was the Demonstration School for Nashville boys and girls. It continued through ten weeks, beginning Monday, June 14, with one session daily, except Saturdays, from 8.30 to 12 o'clock. No tuition was charged except for the kindergarten. The number in each class room was limited to twenty-five.

This department of the summer quarter was a complete elementary school of eight grades, with each class room in charge of a teacher of thorough training and experience.

The plan for the Peabody summer school for Nashville boys and girls received the hearty endorsement of Superintendent J. J. Keyes, of the city schools, who agreed to a full recognition of credit given. Pupils making satisfactory records throughout the ten weeks will be given a half year's credit in the Nashville schools.

Novel Rural School. The *Wisconsin Journal of Education* gives the following report of a rural school in Wisconsin:

The visitor at the Mendota Beach school is impressed with the large opportunity for individual self-expression. Many things are going on at the same time, yet all in perfect order. Near the front of the room

sits one pupil busy with the typewriter. Close by is a girl at a sewing table. Another is stitching on the machine. At the rear of the room is one of the older girls conducting a primary reading class. One boy is putting a language lesson on the blackboard; another is sweeping the hall. The teacher herself is hearing a recitation, and yet there is no confusion, no disorder; everybody is at work—everybody attending to his own business.

The home is asked to reinforce the instruction of the school by reporting to the teacher on the home work assigned to each individual pupil, for it is at home that the projects in manual training and domestic science are worked out. This interests the parents in the work of the school and enhances its value enormously. The visitors' register reveals the names of practically all the mothers in the district; some of them many times, as well as the names of their relatives and friends.

The overcrowded program is no bogey to this teacher. Each pupil has a program of his own which he follows independently of everybody else. That it takes an exceptional teacher to carry out such a complex program without confusion goes without saying, but Miss Wyman has "turned the trick" and she insists that it is easier to do than to follow out a formal program because she has the assistance of every pupil in the school. The "coercion of the group" comes into play because the one who disturbs this program disturbs every individual pupil in the school.

Calls are coming from all over the country for particulars concerning this school and its methods of operation. A descriptive pamphlet giving Miss Wyman's story of the work may be had by addressing Mr. Earnest Warner, Madison, Wis., who is clerk of the school board in the Mendota Beach district and to whom a large amount of the credit is due for making this novel venture a success.

Ionia Public Schools. The plan being tried in the Ionia, Michigan, schools for the lunch hour is as follows:

About twenty-five or thirty girls come to the high school who live too far away to go home to lunch. A class in cookery is offered at the noon hour which will be elective. The student will have one unit of credit for a full year's work. Each lesson will be one and a half hours long, and the girls will cook in pairs, each pair cooking two recipes. A small fee will be charged and no choice of foods allowed in the luncheon.

It is hoped that practical work can be done and that the venture will be a success.

A Correction. In the April JOURNAL a mistake was made in reporting Miss Clara Youngs as head of the domestic science department of the Milledgeville (Ga.) Normal School. That position is held by Miss Eda Lord Murphy, and Miss Youngs is an instructor.

THE Journal of Home Economics

For those interested in Homemaking, Institution Management,
and Educational Work in Home Economics

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MAKING USE OF THE HOME

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State Inspector of Domestic Science, Madison, Wisconsin

It has seemed to the author of the following article, that there is something anomalous in the attitude taken by some advocates of the teaching of Home Economics in the schools, and their attitude towards the same activities in the home.

If we believe that cooking and sewing should not be carried on in the home, then we are teaching a dead or dying science or art, and the subject should be eliminated from the school curriculum. If we are teaching a live, vital subject then the work must be connected very closely with the home, and the interest and coöperation of the mothers must be secured.

The carrying out at home, of the principles learned at school, is the important connecting link, which must be made, if we are to justify the teaching of this subject, often called household science, and establish a place for it among the other school subjects.

Although we think that each change in educational ideas and ideals will, if properly carried out, bring about a perfect system of training for the coming generation, and although we are continually disappointed in the results, we still believe that the school is the factory for turning out the boy or girl, equipped intellectually, to fit into any situation that may present itself—round pegs into square holes, and square pegs into round holes. The man of fifty or sixty, educated in the university of hard knocks, fairly successful, passes judgment on our school system, and finds it wholly wanting. What does the successful business man do, at home or at place of business, to supplement this defective training?

Urban and rural communities have come to recognize the value and importance of industrial training in school, for both boys and girls, and some line of practical work has been added to the school curriculum in nearly every progressive town and city in the country. Much has been accomplished by this change in the educational system in the last decade, and yet it must be admitted that the home conditions have not been changed, to any great extent, by our change in the educational ideals.

As never before in the history of education, people are realizing that the home as well as the school, is an educational factor, and that home and school must be more closely connected if we are to produce a race of capable, thrifty, industrious, and educated Americans.

Many criticisms are aimed at the schools of today because the boys and girls attending those schools are lacking in diligence, accuracy, trustworthiness, and a sense of responsibility, and the criticism is somewhat unjust. Schools can inculcate habits of thrift, interest pupils in the various industries of the community and the requirements for success in those industries; they can give theoretical instruction and practical training in the various trades or vocations, but such work is of questionable value unless favorable opportunity is given for carrying out the instruction given at school and making theoretical work of practical value. Formerly the home furnished all the opportunity needed. Today the average home demands little or nothing of the boy or girl. Parents often feel that because they were obliged to work hard during their school days and forego many pleasures, their children should have a life of leisure during the school period. On the other hand, teachers have often discredited work done at home, or looked with disfavor on the boy or girl who was obliged to work for an education or to give aid at home before coming to school. In these ways, home and school have conspired to bring about exemption from all home duties by boys and girls who are attending school.

A life with no duties, no tasks, no responsibilities, has never developed, physically, mentally, or morally, any boy or girl, and it never will. It has never produced a happy boy or girl, and it never will. Children like actually to produce things; they like to do physical labor; they like to make things grow; they like to try to accomplish the impossible; they are young people of action if they are normal children, and only normal children should be found in the regular school.

When we take away all home work, and subject pupils for six hours daily to a system of instruction from which all memory work, drill, and discipline have been eliminated, we are producing a mischievous, irresponsible race in whom we have crushed all creative and inventive power, and all desire for physical exertion. Home duties still remain for the country boy or girl, and for this reason they give greater promise for making a success of life than the city boy or girl who must find occupation for leisure hours at questionable places of amusement. "Tell me what you do with your leisure, and I will read your character and destiny." It is not what the girl or boy is doing at school between nine in the morning and four in the afternoon that causes alarm, but what occupies the time from four in the afternoon to nine the next morning. If the school could keep the record of the home duties accomplished during that time, it need not bear the burden of the blame for incompetency and dissipation.

Many people are beginning to realize that an irresponsible, shiftless boy will never make a strong, trustworthy man; that a girl who is permitted to stay in bed until time to go to school, who spends her time from four o'clock until bed-time on the street or in idleness, who has no interest in household work with which her mother is overburdened, will never make a happy and satisfied homemaker. Because people are beginning to see this, not alone are agriculture, manual training and domestic science added to the school curriculum, but boys and girls are directed so as to become interested in cultivating city plots, acres of corn and alfalfa and other crops, in the raising of farm poultry, in the making of furniture and useful articles, in cooking, sewing, and general housekeeping, and in choosing a vocation for the future.

It is well to create and arouse an interest in these vital problems, but the task is only half begun when interest is aroused; the home must foster and develop these interests and turn itself into an experiment station for the practical application of these important theoretical principles presented at school. Nothing is of usable value until the underlying principles are mastered, experiments have been tried, the work perfected and skill attained. The school can present the principles, furnish information and opportunity for experiment, but perfection and skill must come through practice, and this practice must be carried on at home or in the shop.

If the home is to be the place of operation where skill and mastery are attained and thrift developed, and if the school and home are to

work in unison and harmony, school credit must be given for work done at home, and the homes must become field laboratories for workers. No place other than a real home supplies all the varied tasks which go to make up the sum and substance of housekeeping. Cooking and sewing may be taught in a practical way in schools, but household decoration, home accounts, laundry, care of children must be largely theoretical. To make theoretical knowledge of any use, an opportunity must be given to put the theory into practice.

Two plans are carried out in Wisconsin to round out the domestic science work given in school and to make it of practical value. The first plan is in operation in over a hundred cities and in many rural communities and is meeting with marked success. The second plan is being tried as an experiment in two cities and gives promise of furnishing the solution to the difficulty of securing a real house for teaching general household management.

In carrying out the first plan school credit is given for all successful home work, such as cooking, sewing, marketing, planning and serving of meals, care of bed-room, habits of personal hygiene and also general housework. A weekly record is made by the pupil of all work done at home and in every case this record must be signed by the mother.

To make the work of value it cannot be a daily repetition of the same monotonous tasks as dish washing, peeling potatoes, etc., but must be varied until it covers the whole range of house work and must end with the girl taking complete charge of the home for a day at a time. A girl may learn at school to make all the dishes found in the average cook book of 500 pages, which could really be condensed into a book of 50 pages, and yet not be able to get even the simplest breakfast on the table and in proper condition for serving in a reasonable period of time. Cooking lessons in school will always lack coördination, because time and funds are limited and the conditions of the home are lacking.

The other method for securing an opportunity to do the work under actual home conditions is for women to allow the schools to use their homes as laboratories. After girls have been given theory, instruction and practice in cooking, preparation and serving of meals, care of rooms, dusting, washing windows, darning and other house work, pupils could be sent to the various homes, and under the direction of the teacher and the supervision of the mistress they could do the

actual work of the day in that home. For example, if two girls were sent to a home in the morning they could prepare breakfast, wash the dishes, sweep the kitchen, dust the house and put living room and bath room in order, make bread, pie or cake, prepare dinner, and do patching and darning. They could be sent to a home where the mistress desired to serve a luncheon or dinner and take complete charge of the work. If the same girls were sent to different homes for their training, they could learn much about methods of running and managing homes, and acquire the practical knowledge which a good housekeeper has attained through years of experience. Five or six days of this actual work in the average home would give the training which the domestic science course in school will always lack, because no opportunity can be created at school for real housekeeping.

Until we recognize the limitations of the school and resolutely turn our attention to the opportunities offered in the home for supplementing school work, our educational system as it concerns Home Economics courses will always be defective, visionary, and open to the criticism that we are not producing capable and thrifty homemakers. No school will ever take the place of the home, and so long as the home shifts its responsibility for physical, moral, and ethical training to the shoulders of young women who teach for a period of from but three to five years, and who are lacking in the practical knowledge of homemaking, our educational system will continue to be the subject of carping criticism from those who do not understand that economic conditions have been transformed in the last decade, and that while homemaking is no longer taught at home, the principles of homemaking taught at school must be practiced again and again in a real home, if the business of homemaking is to be learned. Why not secure that practice in the pupil's own home?

SCHOOL CREDIT FOR HOME WORK IN HOME ECONOMICS

The two short articles that follow were received as the result of correspondence on the subject of credit for home work. The first is a discussion of the subject, given at a meeting of the Central Association of Science and Mathematics Teachers, by Prof. Abby Marlatt, Director of Home Economics, University of Wisconsin, and the second is part of a letter from a professional man who is prominently connected with educational work.—EDITOR.

DISCUSSION

There can be no question that a fundamental truth was stated when it was said that the school and the home must come into closer relationship and that one of the results to be desired for school credit for home work may be the functioning of the school in the home, but there are some more important points that need to be discussed and I shall take them under the topics, Standards in Work, Supervision, and The Psychological Aspect of the Problem.

If the school practice work stands for anything, it should stand for better methods, short cuts, and time saving, through the study and establishment of orderly steps in the work. When we detail the actual practice work, in part or entirely, to the home work, it becomes a question of whose methods we wish to accept as standards. While we do not question that there are many homes where the standards are as high, and possibly higher than the standards of the better trained teachers in Home Economics, still we must realize that with our variation in population and our differing standards dependent upon that variation we need to consider carefully the possibility of fixing in the mind of the child old routine methods that, in the light of present knowledge, should be obsolete. The establishing of short cuts is part of the very definite work in all forms of routine work common to the household, not only in the preparation of food, but also in all forms of cleaning work as well as in the manufacture of clothing. These short cuts should be fixed in the control of the muscles of the child early in life. If we wait till the pupil has entered the high school, we have a two-fold task in teaching the pupil to forget the bad habits and establish good ones with the result that the pupil loses speed in work, a fundamental factor in time saving. Again, it will require extraordinary tact to establish the fact in the minds of the parents as well as the pupils that the method employed by the older members of the family may be time wasting.

How is one to determine the educational value of the work? It is a point that will require infinite tact to settle. As one of the previous speakers has indicated, the line of least resistance and possibly the wisest thing to do is to leave that decision in the hands of the parents and try to establish, slowly but surely, for the future, higher standards which will be accepted in the home.

The question of supervision is an administrative one. At present,

supervision over work in the home is fraught with danger. It is possible that it may be met by indirect methods through the establishment of mothers' clubs or parents' clubs in the school, whereby the teacher and the parents may come in such close social relation that they will eventually discuss means and methods in the training of the child which will lead to the accepting of the middle plane in standards. The teacher can learn from the home work as much certainly as the parents can learn from the teacher. In my own experience in high school work, I discovered early that I needed the coöperation of the home so that I could do my work better through an understanding of home conditions. This resulted in the organization of a mothers' club which is now one of the large influential clubs in that particular state. There are thirty-eight mothers' clubs in the state congress of mothers' clubs. These clubs are working with the teachers in the schools. This gives the teacher an opportunity to use lecture method, demonstration method, and free discussion method in establishing standards and learning the point of view of the home. It has been suggested that it may be possible to select certain homes in a town or village which shall be utilized because they represent the standards necessary for the work. Even this requires infinite tact in selection and in management in order not to cause a feeling of unjust discrimination.

The last point which seems to me important in this discussion is the effect upon the home of giving school credit for home work. The fundamental conception of the home should include the fact that the home is a place in which a group of persons live in such a spirit of social relations that no individual is handicapped and all are encouraged to reach the highest degree of development of which they are capable. The basis of this mutual forbearance is the home spirit which is cultivated through the free doing for others. The rewards are invisible and of the spirit. If we train the child in the home to expect visible rewards in the form of school credit for all forms of work done in the home, may we not weaken that thing for which home stands—the unselfish spirit which makes the home possible? Would it not be wiser to select certain lines of work which functioning with the particular work in the laboratories in the school will bring the home and the school closer together through the giving of school credit and which will admit of the establishment of standards and indirect supervision by the instructor, leaving the other forms of home

work done by the pupil as his or her part of the general work for the group with the incentive and desire to help rather than the desire for visible reward?

LETTER

School credit for home work has been discussed a great deal during the past two years in state organizations as well as at the National Education Association. It was my privilege two years ago to visit the school in Oregon which probably made the first start towards giving school credit for home work. Mr. Alderman, then State Superintendent of Public Instruction in Oregon, wrote and lectured on the problem from the Pacific to the Atlantic. At the meeting of the Department of Superintendence last year at Richmond the present Assistant State Superintendent of Oregon, who was also assistant to Mr. Alderman, very frankly said they would have to take back a great deal that had been said and done relative to school credit for home work. He is convinced, as well as myself, that the mothers at home are not capable, as a rule, of passing judgment upon how the work has been done, and, therefore, getting proper standards. It is too much responsibility and temptation to place before a mother, especially when the school credit for home work means extra school credit and possibly the saving of her daughter's failure at the final examination.

I am not sure yet as to the need of giving school credit for home work in Home Economics. It is a subject, so far as I have observed in schools in almost every state in the Union, which can be handled successfully in the classroom and laboratory. Of course, when it comes to the training of women for extension representatives in Home Economics, I believe there should be some additional practical experience given to the girl who intends to do this kind of work.

I recently suggested to a state supervisor the possibility of securing an accredited list of housewives who would welcome a girl from the senior year to take full charge of her home for a limited time and report upon results to the teacher in charge. If twenty such accredited homes, in which all sorts of problems in regard to the management and conduct of a home are found, could be selected and the girls provided with a certain sum of money to run the home, take care of the children, buy the food, prepare it, and serve it, etc., it would seem to me that such experience under the direction of competent

women might be very valuable to those who are looking, as I have said, to the work of extension representative in Home Economics. This plan would be similar to the plan now being used by many of our land-grant colleges in giving city boys farm experience with accredited progressive farmers during the summer vacations. I do not know that anything just exactly like this has been attempted, but I am certainly interested in the experiment and I am, further, sure that a great many of our girls that are being graduated from departments of Home Economics are woefully inexperienced so far as the practical side of running homes is concerned and also in regard to the needs of extension workers when it comes to talking to women who have been in charge of homes in the country for many years.

A STUDY OF STUDENT DIET

MARION TALBOT

Dean of Women, University of Chicago

There was published by the University of Chicago in July, 1894, a little pamphlet entitled *Food as a Factor in Student Life*. It has been for some years out of print, but there are so many calls for it that a reprint in condensed form seems desirable. The study is of present interest not merely from the historical standpoint, but because the methods and principles it sets forth are suggestive and sound even after the lapse of over twenty years.

The study was the result of an experiment undertaken at the time of the opening of the Women's Halls of the University of Chicago. The carrying out of the experiment was entrusted to the Deans, Mrs. Alice Freeman Palmer and Miss Marion Talbot, with Mrs. Ellen H. Richards, of the Massachusetts Institute of Technology, as expert adviser, and Miss Maria Daniell as manager. Their efforts were ably seconded in a technical way by Miss S. E. Wentworth, of the New England Kitchen, Miss Antoinette Cary, Mrs. Biggers, Miss Knapp and Miss Yeomans. A large measure of the success of the plan and its establishment on a firm foundation was due to the Heads of the Houses, Miss Myra Reynolds, Miss Elizabeth Wallace, and Miss F. C. Brown.

The report begins with a presentation of the Social and Domestic Conditions of the Investigation introduced with the following paragraph:

It has seemed fitting to many students of sociology that there should be exemplified in some college or other educational institution the possibilities of healthful physical and mental life, as they have been made known by recent advances in both social and physiological science. Under the auspices of the University of Chicago, a practical study of the subject has been made. Its results seem of sufficient value and interest to warrant the presentation of a brief account of them.

After a brief description of the fundamental principles of nutrition and a protest against the prevalent disregard of human dietetics in connection with the life of students, the report continues as follows:

It was the privilege of the University of Chicago to take the first step toward remedying this condition, undaunted by the evident difficulties which, owing to the apathy of the community in regard to such matters, seemed almost insurmountable.

To make the experiment in a college was eminently suitable, and as young women are proverbially more exacting and critical as to the table than young men, and at the same time more conversant with household matters, it was quite appropriate to make the first trial in a women's dormitory.

The conditions existing at the University of Chicago were very favorable for an experiment of this kind. The authorities were in sympathy with the movement and the students coming from all parts of the world formed a cosmopolitan community.

Three well-appointed, adjoining buildings, each providing accommodations for about forty students, were ready or nearly ready for occupancy. Each hall had its well-equipped dining room and serving room. Supplementary cooking apparatus only was placed in the two end buildings, the central kitchen, in which the bulk of the cooking was done, being placed in the central building, Kelly Hall. From this the food, ready cooked, was carried to the dining rooms. To these were admitted only the officers and students living in the houses and their guests or the guests of the University.

It was also at this time possible to secure not only the apparatus used in the widely known Rumford Kitchen at the World's Fair but also the invaluable services of its manager.

The three halls were organized with the aim in view of establishing healthful mental and physical life for the 100 or more women who should live in them. In order to help secure the latter end, it was decided to provide a limited variety of food of the best attainable quality, prepared in the best manner, and selected so as to give sufficient nutriment in the right

proportion. The low sum of three dollars and a half per week was the price tentatively fixed for board, in the hope that the advantages of life in the halls might thus be made possible to a large number of students. This theoretical plan was held very elastic in order to make it possible to adapt instantaneously the results of the study to the existing conditions. A working scheme having been established, it was hoped that the details might give others a basis for further accomplishment.

The time assigned to the experiment was from October 1, 1893 to April 1, 1894. Owing to delays in obtaining possession of the halls, and to the difficulty in securing workmen or service during the last month of the World's Fair, the whole plant was not in full working order until nearly the end of the first quarter, so that in reality, the plan as perfected was in operation only three months. During that time the average number of students occupying the halls was 106.

The entire staff of service for the three halls included, besides the director of the experiment, three housekeepers—one for each hall—two indoor men, three cooks, one kitchen maid, seven waitresses, seven chambermaids, one scrubbing woman, one laundress, twenty-five persons in all.

The life in the Women's Quadrangle began without any fixed traditions save those which had been forming gradually while the women students were temporarily residing in an apartment house during the first year of the University.

It was the desire of the Deans that the new life should have as far as possible the simple quiet attractions of a home, and be freed from the objectionable features of an ordinary students' boarding house. Hence it was attempted to adopt the standard of living which prevails in good American homes, and it was deemed an economy of mental power, as well as of physical strength, to secure the relief of the students from duties which could be performed by others. The saving of time and potential energy which was thus effected, although involving considerable outlay for service, was believed to outweigh the advantages which have been claimed for domestic work done by students themselves. The possibilities of the social side of the life were not overlooked. An element of educational value is added to a college home when hospitality may be extended with freedom and ease, and in the new University the contribution of the Women's Halls to the general social life seemed of significance, apart from the direct benefit to those partaking in it. At best the life of any student living in a dormitory has a monastic tinge, a selfish or self-absorbed side unfavorable to the best development of character. Provision was therefore made not only for the occasional entertainment of guests privately, but for weekly receptions to members of the University and their friends, the

expense of which should not be met by any special tax, but which should be included in the general price for board. This hospitality increased the expense of service far more than that of food, and it should be taken into consideration in comparing the cost of this experiment with that of any other institution.

To secure this amount of service and this freedom and dignity in the dining rooms for the limited sum of three and one-half dollars a week would have been difficult with full numbers of paying members and with years of experience; with two-thirds the maximum number and with little or no precedent, it was not an easy task. It was evident that the outlay for food materials must be kept as low as possible, but it was believed that inexpensive food, if it were at the same time wholesome and nutritious, would be eventually, if not at first, acceptable to the majority, provided that it could be made perfect of its kind, and could be served attractively. Special attention was therefore given to the choice of table ware, to the quality and freshness of the table linen, and to serving the food in courses and so quickly that it would be quite hot on reaching the table. The closest attention was paid to securing the greatest attainable digestibility of the food material by means of the best known methods of cookery. It seems to be true that for this purpose a low degree of heat applied for a greater length of time is in general more effective than a high degree applied for a shorter time; hence the largest part of the cooking has been done with apparatus designed according to this idea. Coal, gas, steam and kerosene were all used as fuel, each in the most efficient form.

It is, however, true that even the best methods of cookery will not always make an article of inferior grade equal to one of superior grade; therefore special attention was given to securing the best quality of the food material bought. Even after the standard of quality was once set, constant vigilance was needed to maintain it, as is the common experience. Excellent cold storage facilities added greatly to the possibilities of economical buying at wholesale rates.

The financial results were very satisfactory. By unremitting attention to every detail of expenditure and administration, the income was made to meet the entire cost of the experiment, although it had not been thought probable that, in addition to the current expenses, the extra items of the cost of the inauguration and the salary of the director of the experiment could be met within so short a time. These last expenses once incurred will not be needed again, and the sum thus saved can go in future for greater variety in food, repairs, replacement, etc.

Since detailed records were kept of each item and of the time of service required for each part of the work, it has been possible to gain valuable information for future use.

For instance, the following facts were learned as to the apportionment of the \$3.50 received per week, per person:

For food.....	\$1.54
For condiments, tea, coffee.....	0.105
For food for servants.....	0.385
For cooking food.....	0.35
For serving food.....	0.50
Extra service in cleaning, laundry, and small expenses.....	0.39
For expense of inauguration.....	0.18
Balance reserve for depreciation of equipment.....	0.05
	<hr/>
	\$3.50

The scientific results may be summed up as follows: The family was well fed, having, after all allowances for waste and refuse, a ration of equal food value to that furnished to the American soldier, if the relative weights of the man and woman are taken into consideration. The proportion of the several ingredients was also closely corresponding to the theoretical.

An additional proof of the sufficiency of the food was the fact that nearly all of the students gained in weight and in general physical condition, and were able to work with less headache than usual, in spite of the fact that fundamental principles of right living were occasionally ignored, as is unfortunately too frequently the case when the liberty of the individual is unrestricted.

In order to indicate the liberality of the diet, there is given in the following pages a comparison of the quantity and cost of each class of food with that of the most economical dietary known to us, that of the Normal School and Business Institute at Valparaiso, Indiana, kindly furnished by Mr. O. P. Kinsey.

Many other results of value from a scientific point of view might be deduced from the tables, notably the large proportion of food purchased which never reaches the table, and the large proportion of that so prepared which is not eaten.

This is due in part to the method in vogue in the market of selling without trimming, so that each household has much garbage, in part to careless ways of providing, and in part to the fact that service costs more than food, and that it is cheaper to lose one-third of a bushel of potatoes by paring than to pay for careful peeling.

As to the readiness with which the students accepted the diet, there is less assurance of complete success. So many people are in the habit of finding fault with whatever food is provided, and expect, usually with good reason, to have a choice of a dozen dishes, out of which number one or two may suit, that it would be unreasonable to expect that a simple, nourishing diet, known to be of low cost, would be entirely pleasing to every one, especially in a household made up of people used to the most varied stand-

ards of living. It is not too much to say, however, that while a few of the college women failed to enter into the experiment with sympathy, the general body of students were pleased, and made frequent expressions of their interest and approval.

The first series of tables gives in detail the quantities and prices and nutrients of the food material purchased and sent to the kitchen and shows that each person fed was furnished with five pounds of food per day at a cost of twenty-five cents and with nutrients, after deducting actual wastes, of 108 grams protein, 102 grams fat, and 381 grams carbohydrate and 2953 calories per day. It may be readily believed that these results proved somewhat startling.

Table III gives bills of fare for a period of three consecutive weeks. These are presented with a view to showing the variety secured and the daily apportionment of expense. The proposed limit of expenditure was fixed at \$29 per day, or \$0.223 per day per person for 130 persons fed. Any sum spent in excess of this on one day was necessarily offset by the choice of some less expensive articles of food on a following day. After some careful study it was learned that nearly the same amount of certain articles (constants) was used daily. Their value (13.51) deducted from the day's appropriation of \$29 gave the sum to be spent on variables.

It will be noted that the season when these bills were given, i.e., March, is one when it is difficult to secure much variety. With the advance of spring many articles can be procured which add to the variety and relish.

The constants furnished daily were:

15 lbs. butter.....	\$3 50
Coffee, cocoa, tea.....	1.50
15 lbs. sugar.....	0.75
12.5 lbs. flour.....	0.25
24 gals. milk.....	4.32
1.6 gals. cream.....	1.14
25 loaves home-made bread.....	1.25
10 doz. rolls.....	0.80
	<hr/>
	\$13 51

Table IV shows one day's food calculated to determine the amounts and proportions of the various constituents and their comparison with the general average.

Table V is a comparison of a school dietary with the University of Chicago dietary. Several significant and interesting facts are shown

by an examination of this table and a comparison of a wholesome and sufficient dietary of a school in Indiana, where 600 students were boarded at \$1.40 per week, with that of the University of Chicago, where 106 students were boarded at \$3.50 per week. One source of advantage on the side of the school is that a much larger number of persons are fed and certain expenses are proportionately reduced. In the second place, very little service besides student help is furnished at the school, and a large item of expense is thus removed. Another difference is seen in the substitution at the school of cheaper foods, such as cereals, vegetables, syrup, and butterine, for meat, cream, fruits, and other more expensive foods, though the actual amount of nourishment furnished was practically the same in both cases.

TABLE V

	QUANTITY PER PERSON PER DAY		PERCENTAGE OF TOTAL COST OF EACH ARTICLE	
	Indiana	Chicago	Indiana	Chicago
	<i>lbs.</i>		<i>per cent</i>	<i>per cent</i>
Beef.....	0.476	0.442	0.170	0.128
Other meats.....	.....	0.401	.....	0.141
Fish.....	0.119	0.052	0.067	0.022
Flour and grain.....	0.785	0.437	0.125	0.103
Potatoes.....	1.085	0.680	0.090	0.036
Vegetables (other than potatoes).....	0.490	0.219	0.050	0.024
Beans.....	0.057	0.015	0.008	0.002
Milk.....	0.666	1.295	0.073	0.108
Cream.....	.....	0.120	.....	0.041
Sugar.....	0.135	0.140	0.056	0.029
Syrup.....	0.095	0.017	0.017	0.006
Butter.....	.....	0.089	.....	0.103
Butterine.....	0.119	0.014	0.134	0.011
Dried fruits.....	0.171	0.090	0.057	0.031
Fresh fruits. } Canned fruits }	0.259	0.508	0.070	0.052
Sundries.....	.....	0.022	.....	0.013
Tea, coffee.....	0.026	0.020	0.047	0.025
Cocoa, chocolate.....	.....	0.006	.....	0.013
Eggs and cheese.....	.....	0.043	.....	0.029
Unclassified groceries.....	0.095	0.020	0.036	0.083

Table VI presents a number of standard and actual diets for comparison with the one which had resulted from the experiment.

Table VII shows that the amount of waste usually allowed, viz., 10 per cent, is much less than the actual amount usually is.

The pamphlet closes with a bibliography.

It was followed by a brief article published in the *Review of Reviews*, March, 1896, which gave some conclusions and suggestions from a comparative study of the results obtained later in the course of the experiment. It was found that, (1) the actual weight of the food supplied was greater per person, (2) the cost was less, (3) the nutrients were somewhat higher, though not proportionately so. The error in the popular belief that the amount of nourishment obtained is measured by the amount of money spent for food was clearly shown.

It seems unfortunate that in spite of the wider knowledge of dietetic principles which prevails at the present time, this early example of the practical application of scientific theory still remains almost unique in educational institutions.

DICKENS, AND THE FACTS ABOUT SCHOOL DIET

An article,¹ by F. Mulgrew, in one of the English magazines, based on contemporary newspaper correspondence, accounts of former scholars, and the master's correspondence which recently came to light, describes a small English school of the first decade of the nineteenth century. This school seems to have been a fair example of Yorkshire schools, like Dotheboys Hall, which Dickens brought to attention with such effect, in *Nicholas Nickelby*. The school in question had the attractive if undeserved name of "Eden Hall," and was in the North Riding of Yorkshire. It began business in 1806 and was at first owned in partnership by Mr. Aislabie and Richard Robinson, the latter a salesman for a cotton firm who combined business by traveling through the north of England, selling cloth and canvassing for pupils. Later Aislabie became sole owner.

The first paragraphs quoted are from a newspaper advertisement of 1806 or a little later:

BOARD AND EDUCATION

MR. ROBINSON, MASTER OF THE GRAMMAR SCHOOL,
Bowes, North Riding of Yorkshire

Being permitted by the Trustees of the same, to take a limited number of Boarders, avails himself of this opportunity of submitting his terms to

¹ A Real Dotheboys Hall. By F. Mulgrew. *Cornhill Mag.*, n. ser., 37 (1914), no. 222, pp. 818-830.

the Public . . . Board, Washing and Mending, (including the repairs of Shoes) young Gentlemen under 13 years of age, £16 per annum; those above 13 and under 18 years of age, £18 per annum.

They eat at the same table with Mr. R. and partake of the same victuals, and as to quantity are under no restraint. No more than two sleep in a bed, and there are only two beds in a room. . . .

. . . To those who may consider the liberality of my terms as forming a barrier to my doing justice, I will briefly answer, that whilst my situation enables me to provide the best of provisions at 40 per cent below what is usual in more southern counties, I am still more than an equal gainer, with those masters whose terms are much higher. . . .

"The outstanding feature of Mr. Aislabie's school is that it is probably the only one of which there is any full description by an old pupil—and it is rather surprising that, considering the thousands of boys these Yorkshire schools turned out, this should be so—and that is contained in the *Life of Sir Joshua Walmsley*, published some years ago.

"It was to Eden Hall that Joshua Walmsley went in the year 1807, at the age of thirteen; taking with him, no doubt, the Bible, Church Prayer Book, two pounds of soap, four night-caps, and four pocket-handkerchiefs (Mr. Squeers, twelve miles away, requires of his boys only two of each), for which, amongst other things, Mr. Aislabie stipulated in his prospectus."

The following is from the *Life of Sir Joshua Walmsley*:

Breakfast at Eden Hall consisted of a slice of black ryebread, a large proportion of bran entering into the composition. As a rule it was sour. In addition, a large boiler was placed on the table half filled with water, and into this two gallons of milk had been poured, and some handfuls of oatmeal added. Its contents were shared by the 130 hungry lads. Sometimes oatmeal porridge replaced the contents of the boiler and a teaspoonful of treacle was allowed as a great treat. Three times a week we had a limited amount of meat for dinner; on other days, potatoes, black bread, and cheese. This cheese had grown so hard with age we nicknamed it "wheelbarrow trundles;" the third meal consisted of another slice of bread and of the "trundle" cheese. For a certain number of hours daily we were turned into agricultural laborers, working on a large farm, belonging to our master. We were a healthy set, our constitutions hardened by outdoor life and labour. Some boys complained, some ran away, but none were ill, and only one death occurred during the six years I stayed there.

"It is interesting to note how closely the diet at Eden Hall approximated to that at Dotheboys. There, breakfast consisted of a minute wedge of brown bread, and a brown composition which looked like diluted pin-cushions without the covers, and was called porridge. To treacle—the 'great treat' of Eden Hall—Mrs. Squeers added, with her own hands, the highly prized brimstone, and saw that each pupil had more than he wanted. Dinner was stirabout, potatoes, and hard salt-beef; and for supper there was bread and cheese.

"Really, I think Mr. Squeers was exaggerating when he said in his prospectus of Dotheboys Hall, 'Diet unparalleled.' Mr. Aislabie's menu was quite as liberal, and his boilerful of milk and water was without its counterpart at Dotheboys. But it is plain that Mr. Squeers was quite alive to the value of this as an article of food; for it will be remembered that at breakfast at the Saracen's Head, he ordered twopennyworth of milk in a large jug, which he filled up with lukewarm water, for the five little boys he was taking home with him."

Not all the boys stood the rigors of school life so well as Joshua Walmsley. One reached home in such a wretched condition that his father complained that " . . . my Son got a bowel complaint by being obliged frequently to eat potatoes alone for his dinner and at other times weakly unnutritious & faulty food . . .," and not only threatened to call the master to "strict account," but wrote letters of warning to the parents of other pupils.

HOME ECONOMICS BUILDING AT GEORGE PEABODY COLLEGE FOR TEACHERS

ADA M. FIELD

At the time of its founding in 1875, Peabody Normal School was almost the only institution in the South for the training of teachers. In time, however, the State Normal Schools developed and the need for Peabody in this field grew less, while there arose a constantly growing demand for graduate work and for specialized preparation—particularly in the newer subjects of agriculture, manual training, sanitation and Home Economics. The guiding purpose of the institution from the first had been to give as nearly as possible the service most needed at the time, and in pursuance of this purpose the old Peabody was closed in 1911, its campus passed to the Medical School

of Vanderbilt University and a new location was selected adjoining the campus of the academic and engineering departments of Vanderbilt, thus making possible coöperation of work between Vanderbilt and Peabody College. Here, after more than two years spent in increasing endowment, deciding policies, and erecting the first two buildings, George Peabody College for Teachers began, June, 1914, its attempt to meet some of the new needs.

The two buildings completed are those for Industrial Arts and for Home Economics; others are in progress.

The Home Economics Building forms the north end of a future horseshoe shaped group, and faces west upon the most beautiful part of the campus—a grove of maple, oak and other hardwoods and large, evergreen magnolias. The building is 169 by 81 feet. The style is southern colonial, developed in red brick and native white limestone—a style difficult to adapt economically to school uses, but one so dear to the hearts of the people as to repay extra thought and planning in its construction.

Natural ventilation is secured by cross drafts through casements or through windows fitted with Taber sash, thus admitting air through the entire opening. The floors are laid on a fireproof construction of hollow tile and concrete. Partitions are of hollow tile and cement blocks, which make the building fireproof and soundproof. The interior finish is of hard white plaster; the woodwork of red birch in warm gray stain; the floors of rooms, excepting the cement floor of the laundry and terrazo of the laundry laboratory and the toilet rooms, are of birch shellacked and waxed, while the halls with one exception are covered with brown linoleum. This exception is the main entrance hall which has a floor of white terrazo. Water, steam, electricity, gas, and vacuum are provided in all rooms where needed, and are supplied from a central power plant located in the basement of the Industrial Arts Building. Air for artificial ventilation is washed free from dust and soot in a fan room in the basement. In heating, a combination of the direct and indirect systems is used.

The general plan of interior division is the same on all floors. There is a wide hall the length of the building, with a wider central portion on first and second floors, forming respectively an entrance hall and an exhibit room. On each side of the porch and facing west are offices, single or double; the east side center contains a large room flanked by smaller ones north and south; while a large classroom or

laboratory occupies each of the four corners of the building. On each floor there is one or more light and sanitary toilet and lavatory rooms. There are no passenger elevators, but two wide easy staircases with alberene treads connect the three floors.

At present the classwork of the whole institution is crowded into the two buildings, consequently not all rooms are used as they will be later, but the following distribution of work is the one eventually intended. In the basement is a laundry classroom, institutional laundry, two large classrooms, a locker room supplied with lavatories and a skirt drier, offices, maid's room, store rooms and fan room. The first floor contains the entrance hall mentioned above, opening eastward into the social room. Adjoining this on the left is a students work room, on the right a rest-room. In the wing to the north are laboratories for elementary sewing and dressmaking. In the south wing are a large classroom, and a physics laboratory. In the entrance hall the walls are panelled and here and in the corresponding exhibit hall above, the woodwork is of old ivory finish. The Social Room is a sort of informal parlor, where one can drop in between classes for an easy chair and a friendly chat. The second floor is planned for cooking, nutrition, and chemistry classes. At the north end are a home dining room, two large kitchens and one small one, and store rooms; at the south end laboratories for chemistry, textiles and nutrition, while in the center is an open air classroom, with casement windows and tiled floor.

In equipping the building, flexibility, harmony, and service have been the aim. Many of the Peabody students in Home Economics will be pioneer teachers of the subject and will need not only to know that good work can be done with very simple equipment, but also to be able to do the work in this way. At the same time we aim to have them familiar with as great a variety as possible of standard furnishings and utensils.

It will be noted that space is not given in this building for fine arts or for a lunch room. This is not because either is neglected but because provision is made for Home Economics students in the studios of the Industrial Arts Building and a cafeteria is under construction in the centrally located Social Religious Building.

THE STATES RELATIONS SERVICE OF THE UNITED STATES DEPARTMENT OF AGRICULTURE

H. L. KNIGHT

States Relations Service

On July 1, 1915, a new plan of organization went into effect in the United States Department of Agriculture. This plan involved a transfer of some lines of work from bureau to bureau in several cases, as well as some other changes, but the most noteworthy departure was the establishment, as one of the main divisions of the department, of what is known as the States Relations Service. This new organization developed upon the foundation of one of the oldest branches of the department, viz., the Office of Experiment Stations, and contains this office, with most of its former activities, as one of its divisions. In addition it includes the coöperative demonstration work of the department, which has been transferred from the Bureau of Plant Industry and joined with the extension work of the States, and the farm home management work, which has been added to the work already under way in nutrition investigations.

The functions assigned to the new service are first of all, as the name implies, to represent the Secretary of Agriculture in his relations with the state agricultural colleges and experiment stations under the Morrill (agricultural college), Hatch and Adams (experiment station), and Smith-Lever (extension) Acts and acts supplementary thereto. In addition, the service is to carry on the activities authorized by Congress for farmers' coöperative demonstration work, investigations relating to agricultural schools, farmers' institutes, the relative utility and economy of agricultural products used for food, clothing, and other purposes in the home, the maintenance of agricultural experiment stations in Alaska, Hawaii, Porto Rico, and Guam, and such other matters as the Secretary of Agriculture may designate from time to time.

To carry on these various lines of work, the new service has been subdivided as follows: (1) The Office of the Director of the Service; (2) the Office of Experiment Stations; (3) the Office of Extension Work in the South; (4) the Office of Extension Work in the North and West; and (5) the Office of Home Economics.

The Office of the Director deals with the general administration of

the service, including the handling of its funds, most of its publications, and its library. It also has charge of the investigations on agricultural instruction in schools, especially studies of the methods and subject matter of school instruction in agriculture and the supplying of up-to-date and properly organized subject matter and illustrative material for school use, and has similar duties as regards the farmers' institutes, movable agricultural schools, and like organizations.

The Office of Experiment Stations is organized primarily to advise and assist the state and insular agricultural experiment stations. It collects and disseminates information regarding similar institutions throughout the world, and publishes the *Experiment Station Record*, an abstract journal of the scientific literature pertaining to agriculture. Thirty-two volumes of this comprehensive publication have been completed since its establishment in 1889, assembling fully 100,000 abstracts of articles, and constituting a unique work of reference. The office supervises the expenditures of the Federal funds granted to the state experiment stations, now aggregating \$1,440,000 per annum, and has direct charge of the management of the so-called insular stations in Alaska, Hawaii, Porto Rico, and Guam.

The duties of the service with reference to extension work are divided between two offices, one dealing with matters pertaining to the 15 Southern States, and the other those of the remaining States. These duties include, first, the relations with the extension divisions of the agricultural colleges under the Smith-Lever Act, the supervision of their work and expenditures under that act, and the coördinating of the extension work of the several bureaus of the department with similar work carried on by the colleges. All the States have now assented to the provisions of the Smith-Lever Act. In each State a single agricultural college has been designated as the beneficiary, except that in several States where the college selected is not coeducational a coöperative arrangement for the work in Home Economics has been made with the state college for women, and similarly in a few States having separate land-grant colleges for negroes, a coöperative arrangement has been made for extension work among people of that race. The colleges have all established extension divisions or services and have brought under these divisions all their extension work in agriculture and Home Economics. There is thus provided a means for a unified administration both within the Department of Agriculture and within the States.

The extension offices also continue the farmers' coöperative demonstration of the department. Under this head extension and demonstration work on subjects relating to agriculture, Home Economics, and rural life generally is carried on through practical demonstrations and instruction under the supervision and management of state, district, and county agents working with individuals and through organizations of farm men and women and boys' and girls' clubs. This work is supported by direct congressional appropriation to the department, but is done in coöperation with state colleges of agriculture, departments of agriculture and education, county governments and organizations, and others. In the cotton territory the work includes the teaching and demonstration of methods of meeting the ravages of the cotton-boll weevil. In the North and West, demonstrations in farm management form a special line of work.

The field extension staff in the South includes in the county agent and boys' club work (men agents) 15 state leaders, 18 assistant state leaders, 42 district agents, 681 county agents, and 63 local agents, and the home demonstration and girls' club work (women agents), 15 state agents, 13 assistant state agents, 2 district agents, 355 county agents, and 2 local agents. There are 30 state leaders, 14 assistant state leaders, and 344 county agents, in the county agent work in the North and West, 21 state leaders and 20 assistant state leaders in the boys' and girls' club work, and 20 state demonstrators in farm management demonstrations.

The Office of Home Economics is, of course, the division of special interest to the readers of the JOURNAL. While the name of this office is changed, its personnel and policies are already familiar, as it has for its nucleus the former division of Nutrition Investigations. It will be recalled that in 1894 the state experiment stations were specifically authorized by Congress to include the study of the food of man in their inquiries and instructed to report their progress to this department. An appropriation was also made of \$10,000 "to enable the Secretary of Agriculture to investigate and report upon the nutritive value of the various articles and commodities used for human food." The prosecution of this inquiry was assigned to the Office of Experiment Stations, which had already instituted work in collating information regarding the methods and results of food investigations in this country and in Europe. The enterprise subsequently became a part of the regular work of the office and has contributed largely to

the available fund of technical and popular data on nutrition, and to the introduction of studies along this line into the curricula of a large number of colleges and schools.

The purpose of the nutrition investigations has been to study the use as food of the products of farm, ranch, and garden and to bring the results obtained to the attention of housekeepers and thus help them in making the best, most rational, and most economical use of their available resources, and to provide material for the teacher, physician, and others who need accurate information on food and nutrition in their professional work. Very many questions have been studied and the results obtained have been of decided value to the producer of food supplies and to those who manufacture, handle, and market them, as well as to the housekeeper, the teacher, and the professional man.

The investigations have provided and made accessible a large amount of data regarding the composition and nutritive value of American food materials, their properties, and their uses. Of special studies may be mentioned those which have to do with the relative digestibility of bread made from flour of different sorts, of meat of different kinds and cuts prepared for the table in various ways, of cheese, of cereal breakfast foods, and of vegetables, fruits, and nuts. As a result of this work coefficients of digestibility of a considerable number of common food materials have been deduced.

Much time has been given to studying the effects of various cooking processes upon digestibility and nutritive value and to the relative merits of different methods of preparing food when judged by quality, palatability, and the labor involved. Dietary studies have also been carried on in homes and in public institutions, which have furnished important data regarding the living conditions of American people and have helped in formulating dietary standards used as guides in home and institution management.

The respiration calorimeter, an instrument of precision for measuring the total income and outgo of matter and energy in experiments with man, has been perfected, found useful for a great variety of experimental work, and extensively and profitably employed for such purpose. Later developments of this instrument are forms suited to the study of problems of vegetable physiology and other questions of interest in connection with the work of the department.

A total of 132 nutrition publications have been issued, of which 62 are technical bulletins. The publications as a whole have been in much demand, their total distribution to the close of the fiscal year 1915 being 16,305,800 copies, of which 15,952,150 were farmers' bulletins.

The scope of this work was increased in 1914 to include similar studies of agricultural products in their relation to clothing and other uses in the home. This extension was brought about very largely in response to the demands of housekeepers, educators, and others for work along these lines.

Under the new plan, the work of the Office of Home Economics is grouped under two heads. The first of these includes scientific and practical studies of the nature and uses of agricultural products used in the home for food, clothing, and equipment, and the methods of household work and management, and also aims to make available to housekeepers, teachers, students, and extension workers the results of such studies at home and abroad. The second branch of activity continues the well-known calorimeter investigations, embracing a systematic study by calorimetric methods of food, clothing, and household equipment and work, with special reference to energy values and efficiency. Special calorimeter investigations on other subjects included within the work of the department are also to be conducted in coöperation with the different bureaus.

As already intimated, the various changes outlined for the States Relations Service involve very few alterations in personnel. Dr. A. C. True, who has been connected with the Office of Experiment Stations since 1889, and its director since 1893, has been appointed director of the service. Dr. C. F. Langworthy, chief of Nutrition Investigations since 1905, became chief of the Office of Home Economics, with Mr. R. D. Milner as assistant, and a scientific staff comprising the following: Dr. A. D. Holmes, H. L. Lang, S. C. Clark, W. P. Garrety, Anna H. Whittelsey, C. F. Walton, Jr., J. P. Andrew, Ilena M. Bailey, Caroline L. Hunt, and Helen W. Atwater.

The employees of the States Relations Service as a whole number about 2100 of whom only about 200 are located in Washington.

The initial appropriation for the service aggregates \$2,821,840. This exceeds by \$891,060 the previous appropriation for the Office of Experiment Stations. This appropriation does not include the grants to the other States under the Smith-Lever Act, which for the present year may reach \$1,080,000, but as usual contains \$1,440,000 to be

paid to the state experiment stations under the Hatch and Adams Acts. Some of the principal items are \$103,140 for statutory salaries, \$59,500 for general expenses, \$386,080 for farmers' coöperative demonstration work outside the cotton belt, \$666,020 for similar work within the the cotton belt, \$20,600 for the studies of agricultural schools and farmers' institutes, \$120,000 for the maintenance of the insular experiment stations, and \$26,500 for studies of the utilization of agricultural products for food, clothing, and other uses in the home.

The organization of the States Relations Service, then, is essentially a regrouping of some of the activities of the department on a more logical basis, with the design thereby to increase its efficiency. It is hoped that in this way, with the help of the enlarged facilities in some directions, it may cope more effectively than ever before with the complex problems with which it is being called upon to deal.

BULLETINS ON EDUCATION FOR THE HOME

HENRIETTA W. CALVIN

Department of Home Economics, Bureau of Education, Washington, D. C.

A need for exact information concerning the status of Home Economics instruction in the United States has long been recognized. Dr. Benjamin R. Andrews has now supplied the material so much desired.¹

In Bulletin No. 36 of the Bureau of Education Dr. Andrews has presented a general survey of the Home Economics field and given a brief outline of its development in this country. In 1818 Mrs. Emma Hart Willard "discovered domestic economy as a subject of instruction; Miss Catherine Beecher developed the idea, and to her we really owe a larger debt." It was Mrs. Willard who wrote:

It is believed that housewifery might be greatly improved by being taught, not only in practice, but in theory. There are right ways of performing its various operations; and there are reasons why those ways are right; and why may not rules be formed, their reasons collected, and the whole be digested into a system to guide the learner's practice?

What teacher of Home Economics today cannot echo Miss Beecher's sentiments when in 1841 she wrote her text on the principles of household management?

¹ Education for the Home. Benjamin R. Andrews, United States Bureau of Education. Bulletins Nos. 36, 37, 38, 39.

The author of this work was led to attempt it by discovering, in her extensive travels, the deplorable sufferings of multitudes of young wives and mothers from the combined influence of poor health, poor domestics, and a defective domestic education.

The measure which, more than any other, would tend to remedy this evil would be to place domestic economy on an equality with the other sciences in female schools.

Scientific investigations relating to subjects of interest in the household started in the early part of the nineteenth century and have received increasing attention since that time. The scientists interested in physics, in chemistry, in biology, in economics and in sociology have all given their assistance in solving the problems affecting the welfare of the home. The land-grant colleges and state universities began definite courses in Household Arts in 1872 and 1873. The spread of this teaching has been downward into the elementary schools and upward into graduate schools of science, and in four states is now required in all public schools.

In a brief discussion relating to the methods of teaching in household arts, Dr. Andrews offers justifiable criticisms: "In elementary schools the danger is relatively too much practice, too few ideas; in higher schools, if not too many ideas, often too little practice." "In vocational instruction the child should undertake real projects; in cooking, food which could be served in a meal; in sewing, a garment to be worn; in housewifery, a room to clean—hence the usefulness of the practice house or apartment." A timely word closes this section of the discussion. It is, "The teacher's own attitude toward the home as an institution is important."

Wherever household arts is to be introduced questions arise as to size and arrangement of rooms and probable cost of equipment. There is much in this bulletin relating to these matters.

In the second part of this series of bulletins on Education for the Home, the author brings together the laws of the various states relating to the introduction and maintenance of courses in Home Economics in the public schools, normal schools, land-grant colleges, and state universities. A number of states give direct appropriations to schools wherein "domestic science and agriculture are taught."

The laws relating to certification of teachers of Home Economics vary greatly. "Legal recognition of the need of Home Economics in the equipment of every trained grade teacher is already in evidence."

It is suggested that such household arts instruction as is given in sixth grades and below may well be given by the room teacher and that the teacher of the one-room rural school will, of necessity, give this work and the work in agriculture.

High school instruction in Home Economics courses is always given by special teachers and so the question becomes one of who shall receive this instruction, rather than who shall administer the work.

There is evidently needed on the high-school level two types of home arts training: First, an efficient vocational preparation in homemaking, which will equip a young woman to assume the management of her mother's home or later her own home; second, a training for wage-earning vocations, based originally on the household arts—cooking, catering, baking, sewing, millinery, dressmaking, laundering, nursing (preparatory to nurses' schools), costume design, etc. In these and in all vocational curricula in high schools, there is no thought of mere trade courses, but of combined academic-technical courses that broaden life while preparing for service in a limited field. In the vocational curricula that have no reference to the home, and in the college preparatory course, there should be provision among those broadening courses for one or more years of household science to give some preparation for woman's potential profession of homemaker.

Colleges have come to accept a certain amount of technical work in high school as entrance credits but the author warns that

High-school teachers in Home Economics must be on guard against the maldevelopment of what should be vocational work in homemaking into academic pseudo-scientific instruction in order to curry favor for college entrance recognition. Let vocational work stand on its own feet and recognition will come duly.

That the teaching of Home Economics need not be confined to the regular elementary school, high school and college is evident. Reference is freely made to continuation schools, mothers' classes, night classes and similar agencies employed for supplementing the work previously given in the public schools. Attention is called to the decided advantage derived from holding these various continuation schools in the afternoon rather than at night.

Experiments with daytime classes for home women, to provide practical work and laboratory instruction in unit subjects of the household, were carried out by the public schools of several cities last year, notably with

great success at Montclair, N. J., where about 200 women received instruction, and where this year the plan has been continued and extended to include a class of housemaids, which they attended at daytime hours and on their employers' time.

Classes in housekeeping or housewifery have been formed in many elementary schools and a large number of high schools are now prepared to successfully administer household management classes. Quite recently the "practice house" has sprung into prominence in normal schools, colleges and universities. The author approves of a minimum household arts course in every normal school, this course to consist of "instruction in cookery and sewing of the rural school course." That is, that since the province of the normal is the preparation of rural and elementary school teachers and since these teachers will all, probably, have occasion to teach household arts, they should be required to enroll for a certain amount of this instruction.

After a free discussion of the various agencies disseminating information relating to the education for the home, the author considers the need existing for research in Home Economics.

The Smoot bill proposing Government aid for research in this field has appealed to many as the most certain method in the proposed national legislation to aid education for the home. Home progress is most fundamental to welfare, and yet slowest to come, because of the isolated detached position of the individual home unit, which by its unique nature is not open to the competitive influences which vitalize practically every other human enterprise.

The third bulletin in this series consists of compilations of the courses offered in colleges and universities and brings together much data heretofore obtained with difficulty. Careful outlines of typical courses are here found, together with reports on various extension forms of teaching. Especial attention may be called to the course on the economic position of women by Prof. S. P. Breckenridge of Chicago University; to the survey course in textiles by Prof. Agnes Houston Craig of Pullman, Washington, and to the statement by Prof. Mary Swartz Rose regarding courses in nutrition in Teachers College, Columbia University.

Part IV, or Bulletin No. 39, is a very complete list of books, magazines, and separate articles relating directly or indirectly to education for the home.

There is included in this last bulletin a list of places where some phase of Home Economics is taught.

This entire set of bulletins will be found of the greatest value to all who are interested in the teaching of Home Economics and to those others who desire to obtain a comprehensive view of the growth and development of this new type of education.

EDNA DAY HYDE

BORN AUGUST 24, 1871

DIED JUNE 8, 1915

The death of Edna Day, Mrs. Hyde, was a double sorrow to those of her friends who were fellow workers with her in Home Economics.

Her contributions to the subject, both through scientific research and teaching have been so great, and the future promised so many results in the application of theory to the practical problems of family life that we can ill afford to lose the additional help that she would have given.

To those who counted themselves her friends the sense of personal loss is even greater. Those who knew her best grew into an appreciation of her character and ideals that revealed a most unusual personality.

Her sincerity and honesty that in earlier days made her almost fanatical in her adherence to her convictions, her imperative need for intellectual rather than emotional reasons for action, her unselfishness and intense human interest that brought students and friends constantly to her for help and sympathy, these were some of the qualities that made her an unusual woman. It was characteristic of her that she spent part of the last day of her life in arranging some minerals to be sent to her young nephew.

Miss Day graduated at Michigan University in 1896, and took her master's degree in botany at the same institution a year later.

During the years 1897-1900 she taught in several places, among them the Oswego Normal School, and the High School, North Tonawanda, N. Y.

Her interest in Home Economics was developed, if it did not originate, when she was teaching in the summer school at Chautauqua, N. Y., as assistant in botany, with many of the domestic science students in her classes. The following year she had charge of the work in botany for these students, and herself attended some of the classes in Home Economics.

Her first Home Economics teaching was at Lake Erie College where she took charge of the department, following Miss Bevier.

In 1903 she turned again to study and, in addition to some teaching in the University of Illinois, began her work for her doctor's degree, giving her attention chiefly to botany.

In response to the offer of a fellowship in the Department of Household Administration at the University of Chicago she decided to complete her work there and in 1906 she was given the degree of Ph.D. in Household Administration. Miss Day was probably the only woman who ever earned her doctor's degree directly in this subject.

Of her work Miss Talbot as head of the department writes:

Miss Day showed somewhat notable qualities of independence, patience and resourcefulness. She was quick to appreciate that her choice of subject, viz., the Effect of Cooking on the Starch Grain, would carry her into many different fields. Previous work on starch had been limited in scope. The botanist, chemist, physiologist and other specialists had each investigated the subject chiefly from one point of view. It was her first task to coördinate the different results and in this she showed marked thoroughness and a fine grasp of the difficulties involved. Her whole study was, as she well realized, a piece of pioneer work.

As her scientific investigations proceeded she was tempted to make use of the favorable conditions in which she found herself, to give play to interests which were more deep seated, and in her opinion more vital. The economic and social relations of the family and the household, and especially the biological significance of the human organism in its development and growth, appealed to her strongly, and she was one of the first workers in the field of Home Economics to lay more stress on these aspects of the subject and to subordinate to them the technical details of household science and art. In this lay perhaps her greatest service to the cause of right homemaking.

From Chicago Miss Day went to the University of Missouri to become head of the department of Home Economics, and to reorganize the work that had been for a time discontinued. Her scholarly attainments gained recognition of her work from the faculty, while her enthusiasm and interest won the confidence and admiration of the students. The department grew rapidly under her direction and her influence was felt not only in the University and the town but also throughout the State.

In 1910 Miss Day was called to the University of Kansas to form a new department. Her breadth of vision and her past experience enabled her to develop a wide range of courses, and when she resigned in 1914 she left a well organized department that showed the results of a gratifying steady growth.

Here, as in Missouri, her work was not confined to her own college, but was extended to state teachers associations, to the standardization of public school courses, and to the housekeepers of the state. Of her work a former pupil writes:

As a teacher she was enthusiastic and alert, and to each class she brought the inspiration of her zeal and interest. Her enthusiasm was the enthusiasm of belief, and was communicated to each student. Each one felt her personal interest and responded more eagerly because of it.

As a friend her time and strength were given unselfishly and unsparingly to each who came. The hopes and ambitions of many girls were told to her, voiced perhaps for the first time; and the force of her inspiration will always be a potent influence for many of her friends in Kansas.

In the summer of 1914 Miss Day married Mr. Abraham Lincoln Hyde, professor of Bridge Engineering in the University of Missouri, whose acquaintance she had made while teaching there.

Those who were in touch with her during this short year of her happy married life were impressed not only with her happiness but with the development of character that accompanied this new experience.

Her unexpected death has brought to us all a deep sense of personal loss, and we extend our sincerest sympathy to her husband. For her little son, Edward Clarendon, the best that we can wish is that he may be worthy of his mother.

"In the formative days of the Home Economics Association, at the Middletown summer meeting, at the Cornell graduate school, and in the annual meetings Miss Day's presence was welcome and inspiring;" and future gatherings will indirectly feel her influence.

ALICE P. NORTON.

NOTE.—Thanks are due for this material to Miss Marion Talbot of the University of Chicago, to Miss Isabel Bevier of the University of Illinois, to Miss Louise Stanley of the University of Missouri, and to Miss Elizabeth Nowell of the State Normal School, Warrensburg, Missouri.

EDITORIALS

The Bureau of Education and Home Economics. Both the United States Bureau of Education and the Home Economics world are to be congratulated upon the wise and thorough way in which Mrs. Calvin and her associate Miss Lyford are beginning the important work that lies before them as specialists in Home Economics of the Bureau of Education. Since her appointment last March Mrs. Calvin has visited many of the schools and colleges in the middle west and has made a survey of the Home Economics teaching on the Pacific Coast. She has attended an important conference of Home Economics teachers of land-grant colleges, called by Dr. Claxton to meet at San Francisco in connection with the general meeting of the Association of Agricultural Colleges, with the hope of securing a fuller recognition of the departments of Home Economics in these schools, and more prominence in connection with their annual meetings and reports. She was also present at the meeting of the Home Economics Association at Seattle.

Miss Lyford meanwhile has visited the normal schools of the New England states, where she "found such a diversity of work and such varying quantity of results that the need of standardization becomes very apparent."

Mrs. Calvin writes with regard to future plans that for the present Miss Lyford "will take the normal schools over the country, gather information relating to their courses, visit and discuss the work with the teachers whenever possible, and gather material of such nature as may be helpful to teachers in those schools." Mrs. Calvin will do the same type of work in land-grant colleges and universities. Miss Lyford will interest herself especially in the public schools of the North and East while Mrs. Calvin will respond to correspondence from the Southern and Pacific Coast states.

Home Economics teachers who have found themselves too busy to observe the work of others to any extent will be glad to know that Mrs. Calvin hopes that "in time we shall be a central station for the gathering and distribution of material. With our larger opportuni-

ties we may be able to discover new and interesting efforts and convey this information to teachers meeting similar problems."

That such plans will be successful under the leadership of a woman of such rich and varied experience as Mrs. Calvin no one can doubt. Her home experience with the training and education of her six children and their support after her husband's death; her success as librarian of Kansas Agricultural College, her Alma Mater; her quick advancement to the position of dean of women and head of the department of Home Economics in the same college; her work at Perdue and at Oregon Agricultural College, have proved her executive ability and given her an insight into varied needs and have added to her original equipment of fine personal qualities and ability an experience of great value for the work she is undertaking.

Miss Lyford is a Drexel graduate and her experience includes some years of work in Chicago at the school of Domestic Arts and Science. The last few years have been spent as head of the department in the state normal school at Normal, Illinois.

We extend most cordially to both of these specialists the hearty coöperation of the JOURNAL.

The Editorship of the Journal of Home Economics. With this issue Mrs. Mary Hinman Abel retires from the editorship of the JOURNAL OF HOME ECONOMICS, and is succeeded by Mrs. Alice Peloubet Norton of Chicago. The following minutes and resolutions express the appreciation not only of the associate editors, and of those attending the meetings at Seattle and San Francisco, but also of the subscribers to the JOURNAL and the whole Home Economics Association.

MINUTES

Minutes adopted by the Board of Associate Editors:

With the current issue of the JOURNAL OF HOME ECONOMICS, Mrs. Mary Hinman Abel, Editor from its third issue (that of June, 1909) to the present, at her urgent request retires from its active direction.

Through these six years, Mrs. Abel has given not only time and energy, but the priceless contribution of a wise mind, a wide vision, and an unfaltering faith to the development of this first scientific journal of home making. The oversight of every line of printed material that has gone into the JOURNAL, the writing of much of it personally, and the often more difficult task of securing contributions from others, the direction of business matters,—with a budget now well toward ten thousand dollars a year—all this has required hours of service daily and often blocks of full days at a time, and all this has been given without money remuneration.

At this time, the Board of Associate Editors wishes to record, on behalf of every member of the Association and every reader of the JOURNAL, the common debt of us all to Mrs. Abel's devoted services through these years.

Associated as she was with Mrs. Richards in the development of the Home Economics movement from its beginning in the New England Kitchen in Boston, in 1890, through the Lake Placid Conferences to their merging in the present American Home Economics Association, and chosen as she was in 1909 at Mrs. Richards' suggestion to develop the JOURNAL, Mrs. Abel has by the sound establishment of this publication not only rendered an incalculable service to all present teachers and workers in Home Economics but she has also put in her debt all their successors.

BOARD OF ASSOCIATE EDITORS.

RESOLUTIONS

Resolution adopted by the Seattle Convention, American Home Economics Association, August 21, 1915:

Resolved: That an expression of heartfelt appreciation be sent to Mrs. Mary Hinman Abel on her resignation from the editorship of the JOURNAL

OF HOME ECONOMICS, for her devoted and effective labors over a long term of years which have contributed so materially to the satisfactory status of the JOURNAL, and for the skill, tact, concentrated effort and discretion which successfully pioneered the JOURNAL through its earlier stages and guided it to its present influential position.

Resolution adopted at the Oakland Meeting, August 27, 1915:

Resolved: That the convention of members of the American Home Economics Association meeting in Oakland express to Mrs. Mary Hinman Abel their appreciation of her devoted services, during six years of unremunerated toil, in developing the JOURNAL OF HOME ECONOMICS and bringing it to its present high standard of professional excellence, and that they express to Mrs. Alice Peloubet Norton, who is now to take up the editorship of the JOURNAL OF HOME ECONOMICS, their confidence in the success which will attend her work and their readiness to coöperate with her in any way possible in advancing the JOURNAL.

HOUSEKEEPERS' DEPARTMENT

In searching for information concerning the progress of the Montclair school for housemaids we were referred by Superintendent Bliss to an article in The Countryside Magazine for April. We quote the following:

The school for housemaids grew out of a successful attempt to teach housewives the finesse of their craft. The idea originated with Superintendent of Schools, Don C. Bliss, who sent out several thousand notices last year, advising matrons of the town that they could be further instructed in the arts of housewifery by coming to school. He expected a score of responses but actually 225 women appeared at the domestic science kitchen of the high school. Eight classes were formed.

When the fall semester began, the numbers had come down to eighty, and there were four classes. The decrease in numbers really meant that the work had become permanent, for a sifting process had been going on steadily, and the residue was composed of women who were determinedly seeking to get the most that the teachers had to give. From this success came the belief that classes for housemaids, in which pupils might be taken onward from the most rudimentary principles, would fill a need in the community.

A suggestion to instruct them during the hours which belonged to their employers manifestly could not emanate from the schools. The Housewives' League was fully alive to the benefit its members would receive by coöperating in the movement, and it was because of their support that Superintendent Bliss again sent out notices. Of the maids who came, and were sent, to the Central School on Thursday afternoon, January 14, 1915, approximately fifty registered for the course.

The following article gives further details of the work.—EDITOR.

A SCHOOL FOR HOUSEMAIDS

HELEN ESTHER MARSH

President of the Housewives' League, Montclair, N. J.

When the women in a typical suburb, Montclair, New Jersey, determined to look the domestic service problem squarely in the face, the president of the Housewives' League appointed a committee on

Domestic Service. The first act of this committee was to make public in local newspapers and community clubs the state laws pertaining to the subject; namely, that no intelligence office may be used as a dormitory or restaurant, that every such office must keep an available list of references of its applicants for positions, and that the fee for prospective employer or employe must not exceed 10 per cent of the first month's wage. The coöperation of town officials in the enforcement of these laws was secured.

The committee maintains, for the benefit of the league, a private list of dayworkers, laundresses, cooks, waitresses, mother's helpers and artisans who are available in emergency and whose honesty and efficiency are vouched for by two or more members of the organization.

For the benefit of the housekeepers who attempt to keep permanent help, the chairman of the committee asked the superintendent of schools to establish domestic science classes for housemaids. Here she met cordial coöperation both from the superintendent and the head of the domestic science department. In conference with the latter, the committee evolved a course of twelve lessons including instruction in the care of household equipment, the use of the fireless cooker, the preparing and serving of cereals, soups, sauces, breads, meat, vegetables and eggs. The total cost of the lessons was two dollars per member. The ethical training of the course included such subjects as simple hygiene, avoidance of waste, and moral responsibility to the employer.

There were between sixty and seventy enrolled in classes in three different sections of the town. Now that the completed course of this year has proved a success, the school authorities and the committee of the league are planning more advanced courses for succeeding years. As the first set of lessons presents the principles for the right performance of the duties of the general houseworkers, so more advanced work will train them in more elaborate cooking and the principles of nutrition. The new high school building has a system of unit kitchens, under the direction of the teacher, yet more nearly approximating conditions in an ordinary home than were those in large class rooms. Opportunities will be offered for training in upstairs work and laundry work as well as cooking. Diplomas are given for each completed course of study. The girl whose work warrants a diploma in this class should be able to qualify as a satisfactory general houseworker.

One by-product of this campaign for the betterment of domestic conditions is that the domestic science classes for housewives have materially increased in membership. Doubtless the interest of many more has been aroused by the letters that were sent by the league to town organizations representing over a thousand women and by the circulars distributed in the schools where the special classes were held.

This careful advertising easily explains the enthusiasm of Montclair residents, but it will hardly account for the widespread interest that has manifested itself in cities as far distant as Baltimore, Boston, and Chicago. The success of the plan strikes its taproot into deeper soil. In the first place, it is direct and simple in method. It uses facilities near at hand, the school plant, the coöperation of public spirited officials and intelligent housewives. It makes an application of vocational training to the needs of an industrial class heretofore neglected. It exposes as fallacies certain false concepts that in the heat of the domestic conflict have too often been regarded as axioms, such as the following:

1. Mistresses are tyrannical and maids irresponsible.
2. Mistresses disregard ethics in dealing with each other, therefore the maids may follow their example.
3. The domestic service problem cannot be solved in terms in which other labor problems are solved.
4. A competent mistress has nothing to learn, and a competent maid cannot be improved.
5. Housework is drudgery and cannot become anything else.

That some of these concepts have been changed is shown by the fact that in nearly every case, the mistresses are paying the tuition of their maids, and, without exception, they are giving two and a half hours per week from the regular schedule of work, not from the "day out." The majority of those attending the classes have expressed their appreciation of this fact, and their enjoyment of the work. To them it is a social pleasure as well as a source of instruction, and it is the only pleasure they have enjoyed that is in line with their occupation, not an escape from it. They are beginning to realize that although housework looked upon as a round of tasks is drudgery, yet it can never equal the awful monotony that binds one's unwavering attention every second of eight hours per day to one mechanical process; that housework, considered as a science to meet the vital needs of a family, as a manual art in which to express a love of beauty and order, is a source of personal joy.

WHAT CONTINUATION SCHOOLS MAY DO FOR DOMESTIC SERVICE

ARTHUR D. DEAN

Chief, Division of Vocational Schools, State Educational Department, Albany

We all recognize that household arts courses are not vocational in the exact meaning of the term. Of course the better ones are developed from the point of view of training young women toward the "great vocation of homemaking." Actually they do little or nothing toward fitting people for "profitable employment in a gainful occupation." Very likely it is doubtful whether they can follow the latter definition of vocational training until the public itself is more ready to think of the possibilities of giving trade instruction to prospective cooks, care takers of children, laundresses and cleaners.

Of course we all recognize that many women have criticized the household arts instruction in the public schools because it does not furnish the aforementioned desirable and useful people. I recall that I was once interrupted in a speech before a women's club with the question: "But will these courses give us more and better housemaids?" that my reply was something like this: "Well, my friend, it is doubtful whether the household arts courses in public schools will be of any great assistance in solving your problem until the housewives themselves are able to so organize the processes within the homes that they can successfully compete with factories, stores, and offices which now claim the vocational activities of about every girl who has any ambition." In other words, I pointed out to her in my reply that a factory girl works for from forty-eight to fifty-four hours a week and when the bell rings her work is over; that her work is limited in its scope and therefore is not as tiresome to her as though she were called upon to take all sorts of responsibilities. The store girl has plenty of company during business hours, the world goes right by her counter and she feels herself a part of it, while her sister of the kitchen has an outlook which extends into some one's back yard and the only world which comes to her is the grocer's and the butcher's boys. More need not be said on this line of thought.

There is a field where the public school can be of real service to the home. I refer to the continuation school movement—day or evening or both—where girls already employed in the home may return to

school for a few hours a week and learn how to carry on household activities efficiently and effectively. It is perfectly possible, as is now being shown in Montclair, N. J., to develop continuation classes for women who are already employed in the household. It is only a question of securing the active coöperation of the school authorities and a group of women who need these better servants and who will give "time off" for attendance at the school. The "time off" should be a real period of definite freedom from housework and should not be accompanied by what I fear would be the usual remark, namely: "Now hurry back home just as quickly as you can and dress Ruth for dinner" or "undress Ruth for bed" as the case may be. These girls must not have their wages reduced because they are attending school, and provision must be made for them to have the same freedom to receive continuation school work that boys and men are having in the factory continuation school movement.

It is not in any whimsical spirit that I seriously propose that a continuation school movement which is meant to solve the "servant question" will eventually succeed best when it starts out with the idea of forming a continuation school class for housewives in showing them that in the average home the present system of carrying on the home activities and the demands made upon "servants" are such that the "servant question" can never be solved by throwing all the burden of its solution upon the servants themselves. I abominate this word "servant" and I am sure I share in that the feeling of those engaged in household service. A mere change of word will not change the service. The service itself must be changed and then the term "servant" will be changed over to "one who serves" and the latter, as I understand it, all of us are glad to be.

COMMUNITY HEATING

This department has received questions regarding central heating plants for small towns for groups of detached buildings and for city blocks.

It seems to be very difficult to get exact figures for these plants although a number of them are known to exist.

Concerning one which heats 41 houses in a block in Brooklyn, where heat and unlimited hot water is furnished and included like the water supply with the rent of the house, the manager writes:

The heating proposition, while an attractive one from the standpoint of the tenant, is not an economical one. The cost of heating a house is as great as it would be if each of the houses were heated independently by the tenant, and about the only saving is the saving of labor to the tenant, and the advantage to the landlord is in the demand for these houses.

As a business proposition these houses have never paid as much as could be obtained by investing the amount of money represented by them in bond and mortgage, and such an investment as this would not entail the labor and trouble caused by the houses.

We should be grateful to any of our readers who will furnish reliable data concerning plans for central heating.

SEVEN WAYS TO ANSWER THE QUESTION "WHAT SHALL I HAVE FOR LUNCHEON?"

AMANDA STOLTZFUS

Department of Extension, University of Texas

A unique and most practical examination is being held in the University of Texas, Department of Domestic Economy, where young women are preparing themselves for expert housekeeping and home-making and for the expert teaching of these all-important subjects. Each student taking part in this examination on the subject of Foods, plans her own menu which must pass muster as a "balanced meal;" must do her own buying and submit the receipted bills to the instructor as proof that she has stayed within the price limit—ten or fifteen cents for each serving of six persons; and last but not least, she must prepare and serve this meal within an hour and thirty minutes.

To pay for her expenses each student has the privilege of selling her six tickets at the cost of the meal. So popular have these luncheons become that the demand for tickets is many times more than the number of covers. With the permission of these young women and their instructor, the menus which they actually used, together with the actual cost of the materials, are given with the aim of helping some housekeeper to answer the momentous question "What shall we have for luncheon?"

The menus used were as follows:

I	
Tomato Soup and Croutons.....	\$.168
Meat Pie.....	.24
Cheese and Lettuce Salad.....	.096
Orange Ice.....	.096
Total per service.....	.10
II	V
Hot Rolls.....	.082
Meat Balls.....	.156
Potatoes.....	.059
Salad—turnip cup with peas and carrots.....	.168
Lemon Ice.....	.079
Angel Food Cake.....	.056
Total per service.....	.10
III	VI
Cream Tomato Soup.....	.248
Salmon Croquettes.....	.111
Potatoes.....	.083
Muffins.....	.104
Lettuce Salad.....	.118
Charlotte Russe.....	.227
Total per service.....	.15
IV	VII
Chartreuse.....	.138
Tomato Sauce.....	.048
Rolls.....	.078
Salad—molded vegetable.....	.138
Orange Ice.....	.096
Sponge Drops.....	.072
Total per service.....	.095
Salmon Croquettes.....	.15
Creamed Potatoes.....	.04
Rolls and Butter Balls.....	.07
Daisy Salad.....	.145
Ice.....	.095
Angel Food Cake.....	.06
Total per service.....	.093
Hamburgers.....	.22
Creamed Potatoes.....	.12
Apple Celery Salad.....	.134
Hot Rolls.....	.04
Butter.....	.046
Blackberry Short Cake.....	.28
Total per service.....	.14
Fish and Sauce.....	.27
Muffins.....	.12
Creamed Peas in Cups.....	.07
Lettuce Salad.....	.04
Saltines.....	.01
Orange Ice.....	.09
Angel Food Cake.....	.06
Total per service.....	.11

The basis for the recipes can be found in any good cookbook; but if any special information regarding this work is desired, address Miss Jennie R. Bear, Head of Foods Department, University of Texas, who will be glad to answer any questions.

HIGH SCHOOL ATHLETICS

Unfortunately, there is a widely manifested tendency for the pupil of the high school to ape the performances of his older brother in the college. This is shown in the introduction of competitive athletics and of Greek letter societies and social functions into the secondary schools, tending to counterbalance some of their wholesome features of social intercourse with the snobbery of exclusiveness and the deteriorating influence of late hours and tiring distractions.

We are glad to note, says *The Journal of the American Medical*

Association, a spirit of protest in various parts of the United States against all the forces, social and athletic, which tend to deteriorate the American boy (or girl) at the adolescent age of the high school period. One health officer has recently made a public announcement that proper exercise in a well-equipped gymnasium, under the guidance of a trained instructor, is good for any one, but that competitive athletics, requiring most strenuous exertion, long and tedious training and self-denial, is positively bad for any one before full development, and that all such overacts tend to impair the keenness of the mind and interfere with school work proper, as well as to injure the body. The competitive interscholastic games which require great physical exertion and mental tension should be done away with and a good gymnasium, under the direction of one trained in physical culture, should be provided and work according to the condition and need of each pupil assigned. We agree, further, that mild and well-timed athletic exercise and occasional social functions will tend to relieve the monotony of school life and invigorate body and mind; but over-indulgence is likely to be detrimental.

The dangers referred to are not insignificant; they are real. Prof. C. R. Bardeen of the University of Wisconsin has pointed out, in connection with the participation in athletics in his institution, that the increasing amount of heart disease noted in this country by life insurance companies and others makes it important for the physician to make himself acquainted with the chief causes responsible for these conditions so that he can protect his patients. Over-exertion in competitive sports, especially in school boys, is one factor. From 5 to 10 per cent of freshmen entering the state university have enlarged hearts with dilatation attributable to athletic sports. Foreign specialists also report that any system of athletics which finds its best expression in competition, and has as its chief end the development of athletic supremacy, fails to meet the real hygienic needs of youth and to serve for the proper perfection of the body.

Let no one construe the opposition to competitive games as a movement against physical training and gymnastics. The latter should receive every encouragement that a rational system deserves; but the propaganda for a recognition of the value of bodily exercise carried out in any suitable form must be based on a system of health-promoting practices. Competition belongs to the specialist, who must insure himself against the consequences. He should not be allowed to set the standard for athletic sports.

STAIN REMOVAL¹

<i>Character of Stain</i>	<i>Reagent</i>	<i>Method of Removing</i>
Blood	Warm water	Wash in warm water until stain disappears.
	Warm water and ammonia	Ammonia assists in dissolving the blood.
	Warm water and naphtha soap	Rub with naphtha soap and soak in warm water.
	Warm water and raw starch	If heavy or new goods, as a new blanket, make a paste of raw starch and warm water. Spread on stain, and as fast as starch is discolored, make a new application.
Bluing	Boiling water	Wash in boiling water. Boiling will draw out the spots of blue formed from imperfect bluing. Vinegar or dilute acid will assist, if necessary. This is effective for pale and black blues.
	Boiling water and acid	
	Javelle	Apply Javelle, and follow immediately with boiling water. Thorough rinsing will prevent Javelle from affecting fiber. A yellow cast may remain if the bluing has been an iron compound. This yellow cast or these spots may be taken out as iron rust. (See iron rust.)
Chocolate	Borax and cold water	Cover with borax, wash with cold water. Boiling water will remove trace of stain.
Coffee	Boiling water	Spread stained part over a bowl, pour boiling water on it from a height so as to strike the stain with force.
	Borax or glycerine	Covering the spot with glycerine or borax will often assist in removing a stubborn stain.
	Javelle	As a last resort, Javelle water may be used.
Cream	Cold water	Wash in cold water, then in warm water and soap. Remove as grease. (See August-September JOURNAL, page 383.)
	Warm water and soap	
Ink	Salt and lemon juice	Moisten with salt and lemon juice. Lay in the sun.
	Salts of lemon	Apply as a powder. Then pour on boiling water.
	Oxalic acid	Apply a few drops of oxalic acid, follow with a few drops of Javelle, and rinse quickly with boiling water.
	or	
	Hydrochloric acid	
Indelible ink	Ammonium sulphide and hydrochloric acid	Apply ammonium sulphide, wash with water, then wash with very dilute hydrochloric acid. Can be used on colors.
	Ink eradicators	Use as directed on box.
	Potassium permanganate and oxalic acid	Apply potassium, then wash with warm water, use oxalic acid, and then wash. Any brown from permanganate may be taken out with oxalic acid.

¹ From Laundering. By L. Ray Balderston, 1914, pp. 43-51.

Mimeograph ink	Concentrated ammonia	Apply concentrated ammonia to the stain. Wash, and repeat until removed.
Printers' ink	Lard or grease	Rub lard or grease in well, then wash in warm water and soap.
Iron rust	Hydrochloric acid	Spread stained portion over a bowl containing one quart of water and one teaspoon of borax. Apply acid, drop by drop, until stain brightens, then dip stain at once into water. If not removed, use same method until stain disappears. Care should be taken to use either borax or ammonia in rinsing water.
	Citric acid and cream of tartar	Apply to spot, wash with hot water. Rinse thoroughly.
	Lemon juice and salt	Sprinkle stain with salt and moisten with lemon juice; lay in the sun. This method is slower and less likely to affect material. Either method will extract color.
Milk	Cold water	Wash in cold water, then follow with soap.
Mucus	Salt and water	Mucus as found on handkerchiefs may be soaked in salt and water, then washed in warm water with ammonia or with soap.
	Ammonia	
Paint	Soap and water	If paint is fresh, use at once soap and water if goods are washable.
	Gasoline	Wash the spot in any one of these, remembering that they are inflammable. NOTE. Old stains may be softened first with lard, oil, kerosene before using any of the remedies.
	Turpentine	
Varnish	Benzine	Wet the stain with alcohol or turpentine and allow it to stand a few minutes, then wet again and sponge off with a clean cloth. Continue this until stain is removed. In case the color is affected by alcohol, sponge with chloroform; but for blue material use dilute vinegar.
	Alcohol	
	Turpentine	Wash a <i>fresh</i> vaseline stain with turpentine. Soaking may aid the removal. Stain cannot be removed after it has been boiled.
Vaseline	Turpentine	
Wagon grease	Lard	Rub either oil or lard on stain, then wash with warm water and soap. It will be found of help to keep a cloth or blotter under stain while rubbing on the oil.
	Olive oil	
Wax	Absorbent paper and warm iron	Scrape off all that is possible, then place blotting paper over spot and press with warm iron. This will soften wax and cause it to be absorbed by the paper. If there is color, as from colored candle wax, use alcohol to extract color after removing wax. Javelle may be needed to bleach the color.

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FOODS AND COOKING

The Phosphorus Content of Wheat and of Wheat Flour; and Its Relation to the Baking Qualities of the Flour. By H. L. White and R. F. Beard, *North Dakota Sta. Bul.* 106 (1913), pp. 59-64.

Food Inspection and Other Topics. By J. H. Wallis and C. D. Mason, *Bien. Rept. Idaho State Dairy, Food and Sanit. Inspector and State Chem.*, 5 (1911-12), pp. 234, pls. 16, figs. 2.

The Structure of the Soy Bean. By T. E. Wallis, *Pharm. Jour. [London]*, 4. ser., 91 (1913), no. 2597, pp. 120-123.

Ceylon's Food Supply. By C. K. Moser, *Daily Cons. and Trade Rpts. [U. S.]*, 17 (1914), no. 114, pp. 891-893.

Use of Dried Potatoes [i.e., potato flour] in Bread Making, *Landw. Wchnbl. Schles. Holst.*, 64 (1914), no. 35, pp. 851, 852; abs. *Expt. Sta. Rec.* 32 (1915), no. 3, p. 252.

Changes in Bread on Aging. By M. P. Neumann, *Ztschr. Gesam. Getreidew.*, 6 (1914), no. 6, pp. 119-122; abs. *Expt. Sta. Rec.* 32 (1915), no. 4, p. 356.

[Composition of] Cassava. By J. S. Camus, *Philippine Agr. and Forester*, 3 (1914), no. 4, p. 75.

Changes Taking Place During Baking—Chemical Composition of Bread. By H. Kalning and A. Schleimer, *Ztschr. Gesam. Getreidew.*, 6 (1914), no. 7, pp. 137-143; abs. *Expt. Sta. Rec.* 32 (1915), no. 4, p. 354.

The Banana Fruit. By J. Dacanay, *Philippine Agr. and Forester*, 3 (1914), no. 4, pp. 81-83. (Data regarding chemical composition and culinary properties and some recipes are given.)

The Changes in the Character of the Fats During the Process of Cooking. By Helen Masters and H. L. Smith, *Analyst*, 39 (1914), no. 461, pp. 347-350.

Ice Cream Experiments, *Ann. Rpt. Ontario Agr. Col. and Expt. Farm*, 39 (1913), pp. 92-94.

A Program for Dehydrated Vegetables. By R. J. Burgess, *Pure Products*, 10 (1914), no. 8, p. 399.

[Coffee Consumption and Modes of Grinding in Foreign Countries]. By J. B. Osborne, W. H. Gale, A. Halstead, H. L. Washington, E. L. Adams and W. Dawson, Jr., *Daily Cons. and Trade Rpts. [U. S.]*, 17 (1914), no. 141, pp. 1642-1646.

ECONOMICS

Keeping Down the Cost of Living in Germany. By C. N. Ifft, *Daily Cons. and Trade Rpts. [U. S.]*, 16 (1913), no. 270, pp. 894, 895.

Cost of Living in New Jersey, *Ann. Rpt. Bur. Statis. Labor and Indus. N. J.*, 36 (1913), pp. 153-164.

[Food and Its Cost at] the Garland School of Home Making, *Half Yearly Rpt. Garland School Home House 1913-14*, pp. 11. (Resident pupils act in turn as housekeepers at this home house. The system of management followed is described and financial statements made.)

The Organization of a Rural Community. By T. N. Carver, *U. S. Dept. Agr. Yearbook*, 1914, Sep. 632, pp. 58, figs. 2.

The Market Place; Minimum Prices and Speculation, *The Independent*, 81 (1915), no. 3448, pp. 32, 33.

Return of the Market Basket. How Farmers and Housewives May Reduce the Cost of Living by the Spread of Free Markets in America, *The Craftsman*, 27 (1914), no. 2, pp. 194-205.

BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS if the Journal price is listed.

Experimental Domestic Science. By R. H. JONES. Philadelphia: J. B. Lippincott Company, 1914, pp. 235. \$0.80.

Under the above imposing title is presented a very modest little book having novel ideas as to the teaching of the physics and chemistry of household work. Of 227 pages of reading matter, 140 deal with a mixture of physics and chemistry, while the balance of the book is devoted to the latter subject exclusively.

The reason for introducing milk, its composition and analysis in the opening chapter is hard to imagine; the subject is too difficult and simpler subject matter would seem to be more advisable—water, for example. Pages 54–58 deal with osmosis and diffusion and might well be improved or left out; the explanations are confusing and unsatisfactory. On the whole the aim of the work is in the right direction in making distinct application of the principles of physics and chemistry to the things of everyday life but it is to be hoped that the subject matter will be rearranged and simplified and many errors corrected in a later edition.

Family Expense Account, including problems of investment and expenditure. By THIRMUTHIS A. BROOKMAN. Boston: D. C. Heath and Company, 1914, pp. 96. \$0.60. By mail of the Journal, \$0.65.

The first school text on household accounts, by the former head of the department of mathematics in the Berkeley, California, high schools, merits commendation and warm approval, both in principle and in particulars. It has the double purpose of teaching the mathematics of money underlying simple investment and expenditure, and of considering problems rising in families of small income. A 14-year detailed record of expenditures in a family forms the central material for study; and methods of record keeping are presented and the following problems, among others:—pocket money, checks, the advantage of estimating expenses in advance (the budget idea, though it does not seem to be so called by name), banking and interest, meter charges for gas and electricity, buying a house, supplementary income through night work and by taking a boarder, taxes, mortgages, children's moneys and the cost of children, and the problems of

insurance. The latter is one of the best things in the book, in that there are illustrated several kinds of insurance which may protect the household—fire insurance, ordinary life insurance, and this applied as a security for paying off a mortgage, accident insurance and the change which the new compensation laws will make in the status of the employee as regards accidents and the need of accident insurance, fraternal versus legal reserve insurance. Here is enough to be a real contribution. While the book is primarily suited for upper grade and high school students (and by the way would be an admirable text for the much needed instruction of boys as well as girls), yet with the present undeveloped state of subject matter for college use it will be found useful by teachers in these higher institutions as well. One may express the hope that there are other teachers of Home Economics busy preparing texts in this same field and that in the next few years the school and college field will both be supplied with other books which should improve in quality as they appear. It is worth while to characterize two other available books on household accounts: Haskin's *How to Keep Household Accounts* (Harper) is a delightful essay by a master of general accounting theory on the value of accounts in the household, with suggestions to the housewife as to how to keep them; Ibotson's *Personal and Domestic Accounts* (Gee, London) is a statement, by an expert accountant, of the form of classified cash book and ledger necessary if one is to install a set of books to control household expenditures with the same exactness as is usual in the records of a business house—it is a book for the person who understands book-keeping or is willing to take the trouble to learn it. Also, in Miss Terrill's *Household Management* (American School of Home Economics, Chicago) one will find an admirable discussion of accounts.

Arithmetic, Book I, Fundamental Processes; Book II, Practical Applications.

By JOHN H. WALSH AND HENRY SUZZALLO. New York: D. C. Heath and Company, 1914. Book I, pp. 246. \$0.35; Book II, pp. 518. \$0.65.

As explained by the authors "the series is so arranged that a child may acquire an easy and accurate command of the fundamental processes by the end of the sixth year. The seventh and eighth school years are thus left free for a study of those business institutions and practices, the understanding of which is vital to an extended use of arithmetic in practical life."

In *Practical Applications* problems are given dealing with income, house furnishing, rent, food, etc. Menus with calories and itemized costs are used to furnish figures for arithmetical processes, and methods of household accounting are given, with a lesson on the proper division of income.

An Outline of Nature Study. [Reprinted from the *Popular Science Monthly*, 84 (1914), no. 4.] By CHARLES LINCOLN EDWARDS.

This outline shows the plan and practice in the Los Angeles public schools. In their nature-play the relationship of living things to one another and to the child is of greatest consequence. The play started in the school is continued in or about the home.

Making gardens of unused ground, learning the utility of animals often considered as useless, and of useful as well as harmful bacteria bring a knowledge of economics into this nature-play.

"The great end of nature-play for the child is not simply to learn of the rest of nature but better to know himself as a part of nature."

Large Indian Cornfield in North Dakota Long Ago, and An Indian Drama Petite for School Children. By A. MCG. BEEDE. Bismark Tribune Company, Bismark, N. D., 1914, pp. 24, 10 cents.

The brief play which occupies the last four pages of this pamphlet represents the Feast of Corn as celebrated by the Mandan Indians of North Dakota. The actors include boys who set up the ceremonial tents, priests who conduct the ceremonies, squaws, dancers, etc. The number of speaking parts need not be large and only simple scenery and few properties are required. The text is unobjectionable as to style and seems historically accurate. The play should be easy for high school or upper grade pupils to present.

School Hygiene—A Report of the Fourth International Congress of School Hygiene, held at Buffalo, N. Y., August 25-30, 1913. By W. C. RYAN, JR. (*Bur. of Ed. [U. S.] Bul. 48* (1913), pp. 121).

A brief summary of the proceedings of the congress and some of the most important papers, and also concrete data of the school hygiene movement as shown in the scientific exhibit made under the direction of the congress and in connection with it. The two subjects receiving the most attention at the congress were open-air schools and sex hygiene, but school architecture and equipment, medical and dental inspection, the feeding of school children, their classification according to mental ability and kindred subjects were also considered.

Transactions of the Fifth Annual Meeting of the American Association for Study and Prevention of Infant Mortality. Published by the Association, 1211 Cathedral St., Baltimore, pp. 391. \$3.

This volume contains reports of the various committees and officers, and the addresses given at the sessions of the Boston meeting, November 12-14, 1914.

The general topics considered were: Nursing and Social Work, Pediatrics and Vital and Social Statistics, Obstetrics, and Continuation Schools.

The Spanish edition of *The World's Work* began with the September, 1915, number and is to be issued quarterly by Doubleday, Page and Company. This edition of *The World's Work* is being issued primarily for distribution in South America; but subscriptions will be accepted to be mailed anywhere at a price of \$1 a year. There will be no foreign postage.

Handy and Practical Farm Library. Missouri State Board of Agriculture, Columbia, Mo.

Under this heading the State Board publishes monthly bulletins which deal with rural problems. The February *Bulletin on Household Arts* (pp. 88), "aims to introduce sewing into the schools, to furnish a definite outline for school work, to serve as a guide for teachers untrained in the work."

Instruction is given in hand and machine work, pattern drafting, the use of commercial patterns and garment making. Diagrams and other illustrations accompany these instructions.

The hygiene of dress, laundering, textile tests, and the removal of stains, together with a list of references, complete this *Bulletin*.

BOOKS RECEIVED

Analysis and Cost of Ready-to-Serve Foods. By F. C. Gephart and Graham Lusk. Chicago: Press of American Medical Association, 1915, pp. 72 plus tables. \$0.50. By mail of the Journal, \$0.56.

Civilization and Health. By Woods Hutchinson. Boston: Houghton Mifflin Co., 1914, pp. 355. \$1.50. By mail of the Journal, \$0.61.

Educating the Child at Home. By Ella Frances Lynch. New York: Harper and Bros., 1914, pp. 214. \$1. By mail of the Journal, \$1.07.

Electric Cooking, Heating, and Cleaning. By Maud Lancaster. Authorized Am. ed. by Stephen L. Coles. New York: D. Van Nostrand Co., 1914, pp. 329. \$1.50. By mail of the Journal, \$1.64.

Elements of the Theory and Practice of Cookery. By Mary E. Williams and Katharine Rolston Fisher. New York: Macmillan Co., 1913, pp. 347. \$1. By mail of the Journal, \$1.10.

Good Housekeeping Magazine Institute Bulletin. Pub. by Good Housekeeping Institute, 119 W. 40th St., New York City, W. H. Richards, Director. No. 1 Efficiency Kitchens, 1914, pp. 47. No. 2 Cooking Utensils, 1915, pp. 32. \$0.15.

The Housekeeper's Handbook of Cleaning. By Sarah J. MacLeod. New York: Harper and Bros., 1915, pp. 259. \$1. By mail of the Journal, \$1.08.

Human Foods and their Nutritive Value. By Harry Snyder. New York: Macmillan Co., 1914, pp. 362. \$1.25. By mail of the Journal, \$1.37.

Profitable Vocations for Boys. By E. W. Weaver and J. Frank Byler. New York: A. S. Barnes Co., 1915, pp. 282. \$1. By mail of the Journal, \$1.07.

School Credit for Home Work. By L. R. Alderman. Boston: Houghton Mifflin Co., 1915, pp. 181. \$1. By mail of the Journal, \$1.07.

A Study of Foods. By Ruth A. Wardall and Edna Nobel White. Boston: Ginn and Co., 1914, pp. 174. \$0.70. By mail of the Journal, \$0.78.

NEWS FROM THE FIELD

ANNUAL MEETING OF THE AMERICAN HOME ECONOMICS ASSOCIATION, UNIVERSITY OF WASHINGTON, SEATTLE, WASHINGTON, AUGUST 18-21; OAKLAND, CALIFORNIA, WITH NATIONAL EDUCATION ASSOCIATION, AUGUST 26-28, 1915

The seventh annual meeting of the American Home Economics Association was held in two parts, first at Seattle, and then at Oakland. The first brought together over 200 members and others for a series of interesting and profitable sessions at the University of Washington, Seattle, from Wednesday to Saturday August 18-21, 1915. While the larger part of the delegates came naturally from the Northwest, there was a good representation from the South, the Middle West, and the East. The program presented excellent papers, and helpful discussions arose at many points in the meetings so that those who have attended preceding conventions of the Association regarded the Seattle meeting as one of the best conventions ever held. The organization of two new sections, that for extension workers of the Association, and that for science workers, each calling together representative persons from various parts of the country, and each presenting a special program of merit, is enough to make this Seattle meeting memorable.

The convention began on Wednesday with an excursion to Tacoma, arranged for delegates who came early. This was only one delightful item in a succession of events provided by the hostesses, Miss Raitt and her associates of the department of Home Economics in the University of Washington. On Wednesday evening the council met to hear reports of officers and to consider Association business, adjourning for later meetings during the convention. As a representative body made up of the elected officers and the special council members chosen for a five year term together with representatives elected by the sections of the Association and its affiliated societies, the Council contributes an element of permanence of great importance in the business of the Association. The special effort made at the Cleveland Convention under Miss Arnold's leadership to locate the executive power of the Association with the Council rather than with the president alone or with the smaller executive committee was continued at Seattle under Miss Van Rensselaer. The Council, by the way, holds meetings not only during the conventions but also once or twice during the year and in intervals transacts its business by mail.

The program sessions of the Association began Thursday morning with a roll call to which all were asked to respond by a brief statement of progress in their individual fields of work. This did much to promote from the start acquaintanceship among the delegates and was the basis of constant personal interviews throughout the convention. At the opening session a more extended statement of the Home Economics work of the U. S. Bureau of Education was given by Mrs. Henrietta Calvin, Expert in Home Economics on the Bureau Staff, in which she explained that Commissioner Claxton had divided the Home Economics work of the Bureau between herself and Miss Lyford as follows: Mrs. Calvin is to have charge of inquiries regarding instruction in land-grant colleges and universities; and Miss Lyford regarding instruction in normal schools; while the elementary and high school field is divided between them. Miss Lyford taking the East and North, and Mrs. Calvin, the South and West. Mrs. Calvin spoke of the four bulletins on Education for the Home recently published by the U. S. Bureau of Education which are available for distribution on request. Mrs. Ellen P. Dabney followed with a statement of Home Economics in the schools of Seattle, especially of its novel features such as medical inspection which is correlated with Home Economics work, and later in the week delegates were given an opportunity to visit the schools. Greetings were also brought to this opening session from the U. S. Department of Agriculture by Miss Ilena Bailey, of the Office of Home Economics, who explained some of its investigations (the results of which are soon to be published) on conditions and costs of living in farm houses, especially with regard to woman's house work and its value.

The evening session on Thursday included an address of welcome by Dean Haggett of the College of Liberal Arts of the University of Washington, and an address by Miss Raitt, head of the Department of Home Economics of the University. Miss Raitt outlined the development of the department referring to its success in finding a middle ground between the schools of science and of the liberal arts, so that its students may take either the Bachelor of Arts course or the Bachelor of Science course. The department after three years now registers over 400 students so that the recent decision of the University authorities in assigning to this department the one new building authorized by legislature, has been accepted by the whole university community as entirely appropriate.

The President's Address by Miss Martha Van Rensselaer followed at this evening session and dealt with the scope and purpose of Home Economics education. It will be printed in a future number of the JOURNAL.

On Thursday afternoon an automobile ride through the parks and boulevards had been provided by the University Commercial Club which

gave delegates a vivid impression of Seattle as a city of homes surrounded by well kept lawns with a profusion of roses and other flowering plants; and on Friday morning the students' Home Economics Club of the University served a delightful alfresco breakfast under the trees in Ravenna Park.

At the Friday morning session, Mrs. Arizona W. Calkins, formerly Washington State Food Inspector of Municipal Markets, described the efforts which had been made in Seattle to eliminate middle men and hucksters and to restrict the stalls in the municipal markets to actual producers of truck. Miss Mitchell who has in charge the inspection of markets, gave concrete details of the sanitary and business supervision of the Seattle markets.

The Friday evening session was marked by three unusual addresses. Mr. Smith of the U. S. Department of Agriculture who supervises the projects under the Smith-Lever law, explained the Department's position in regard to the law. Projects which will increase the farm income, or reduce household drudgery, or increase recreative opportunities on the farm are favored at present. The second address by Miss Ruth Wheeler of the University of Illinois was a comprehensive survey of recent advances in the science of nutrition; and the third was a masterly analysis of the whole field of scientific thought with references to the nature of Home Economics as a science and its relation to other sciences, which was presented by Dr. H. G. Byers of the University of Washington, Department of Chemistry, under the title, *The Essential Unity of Science*.

The concluding session of the Seattle Convention was held Saturday morning with addresses by Miss Crooks of Milwaukee-Downer College on the Aim of Textile Teaching, and by Miss Ina K. Pitner of the Los Angeles Schools on Teaching Textiles in High Schools. The concluding address of the convention followed, by Miss Alice Ravenhill, on Economics of Efficiency. Miss Ravenhill, known to all Home Economics workers as the leader in the English Home Economics movement, and the author of various standard works, is now making her home in British Columbia and all who attended the Seattle convention owe her a debt for the clear view of fundamental issues in Home Economics, which her address presented.

After these addresses a brief business session was held in which there was reported from the Council and from committees the important items of business: the organization of the Science Section with Miss Ruth Wheeler of the University of Illinois as chairman; the Extension Section with Miss Gertrude M. McCheyne of Utah Agricultural College, as chairman; the appointment of a Committee on Home Economics Day with Dr. C. F. Langworthy as chairman; International Committee on Home Economics

Extension into Foreign Countries, Dr. B. R. Andrews as chairman; Journal of Home Economics Board, with Mrs. Alice P. Norton as editor, and Mrs. Mary H. Abel, Dr. C. F. Langworthy, and Miss Isabel I. Lord as associates; and the appointment of new members of standing committees.

The Convention Committee on Legislation reported favorably on the Smith-Hughes bill for federal aid to vocational education, and the federal child labor bill, and asked all members to study these bills and write their representatives in Congress, also to study state legislation in their own state relating to Home Economics as presented in the Bulletin on Education for the Home, Part II, issued by the U. S. Bureau of Education. (See page 426.)

The Committee on Resolutions reported a resolution drawn by the Canadian delegates regarding extension work in the Canadian provinces, calling for more club and women's institute work.

The Council reported that the 1916 meeting would be held at the University of Minnesota probably late in August. The Association will be the guests of the department of Home Economics.

The final item of business was the report of the tellers on the election of officers which was as follows: For President, Miss Martha Van Rensselaer, Cornell University; Vice-President (for 3 years) Miss Abby L. Marlatt, University of Wisconsin; Secretary, Mrs. Alice P. Norton, Chicago, Ill.; Treasurer, Prof. William Morse Cole, Harvard University; for new members of the Council (for 5 years) Mrs. Henrietta Calvin, U. S. Bureau of Education; Alice Loomis, University of Nebraska; Mary E. Sweeney, University of Kentucky; Fannie Twiss, Normal School, Regina, Canada; Edna A. White, University of Ohio.

Mention should be made again of the delightful hospitality extended at Seattle. It included, in addition to the entertainment mentioned above, a lawn party given on the University campus Friday afternoon by members of the faculty women's club, with folk-dancing by students of the University, and a final yacht ride on Puget Sound, and a fish supper on the beach on Saturday afternoon after the close of the convention with the State and City Home Economics Associations as hosts.

The meetings at Oakland opened Thursday morning, August 26, with joint session morning and afternoon with the departmental Congress on Vocational Education and Practical Arts of the National Education Association, with representation on the program accorded to the American Home Economics Association. The latter association then carried out its own program on the two following days. On Thursday's program addresses were made on Art, and its Place in National Growth by Frank Alvah Parsons of New York; on Home Economics Applied to Life by Martha Van Rensselaer, president of the American Home Economics Association;

and on *The School Shop in Relation to Bread Winning* by James Collins Miller, Provincial Director of Technical Education for Alberta, Canada. The first address by Mr. Parsons attracted so much interest that by vote of the meeting he was asked to speak further at the Friday session. In the afternoon of Thursday, President Pearse of the Milwaukee Normal School, Prof. Richard G. Boone of the University of California and Dean Thomas M. Balliet of New York University spoke on economic aspects of training for vocations.

The first session of the Home Economics Association Friday was opened by Mr. Parson's address on Art and Home Economics in which in terms of general art principles he presented many practical suggestions as to betterment of home conditions and as to teaching related to this problem. After a roll call at which delegates from widely scattered sections told of their work, the second address of the morning was delivered by Miss Ednah A. Rich, President of the Santa Barbara, California, Normal School, who spoke on the Work of the Domestic Visitor. She told particularly of recent adoption in California of a law which authorizes local boards of education to appoint visiting teachers of Home Economics, and outlined the proposed duties of such workers who are to aid in administering the Mothers' Pension Law and to help foreign mothers adopt American standards of living. By vote the meeting extended to Mrs. Gibson of Los Angeles, sponsor of this law, an expression of their appreciation of her services to Home Economics.

At the afternoon session a paper on Educating the Filipino Girl was presented by Mr. Potter, Chief Clerk in the Bureau of Education at Manilla; and addresses were given by Prof. Jessica B. Peixotto of the University of California on Class Standards of Consumption in Relation to Economic Progress, and by Supt. J. H. Francis of the Los Angeles Public Schools on Educating the Modern Girl.

Miss Peixotto's address gave rise to a discussion of the need of further facts regarding the expenditure of middle class families. By resolution the president of the Association was authorized to appoint a committee on the collection of budget material.

In the evening the convention dinner was held in the California building at the Panama Exposition with about 100 persons present. On this occasion the Exposition presented to the Association a bronze medal suitably inscribed, attesting the fact that the Association held its 1915 convention at the Exposition.

Brief addresses were made by Mrs. Barnum, Chairman of the California State Board of Education, Professor Jaffa of the University of California, Dr. Adelaide Brown of the California State Board of Health, Miss Bailey of the U. S. Department of Agriculture, Miss Raitt of the University of

Washington, Miss Bartlett of San Francisco Schools, Miss Rose of Cornell University and Dr. Andrews of Teachers College.

The closing session was held Saturday morning with addresses by Professor Jaffa on Conditions Regarding the Pure Food and Drug Laws, and by Dr. Andrews on Teaching Budgets. The latter paper was followed by a discussion to which valuable contributions of experience in this field were made by Miss Brookman of the Oakland Schools, by Miss Weller of the Alameda Schools, Mrs. Widtsoe of Logan, Utah, and others.

Throughout the Oakland meetings, as at Seattle an excellent professional spirit was displayed and time and again real contributions were made from the floor, in the reports of local work and the discussion of papers. The high standards of work in the West, the advanced condition of instruction in elementary and high schools, and the evidence of excellent college and university work deeply impressed those from other sections.

Institution Economics Section Conference. The sixth annual conference of the Institution Section of the American Home Economics Association was held at Lake Placid Club June 25 to 29, 1915. The officers were Mrs. Melvil Dewey, Vice-president of Lake Placid Club, as Honorary Chairman, Miss Sarah Louise Arnold, Dean of Simmons College, Boston, as Acting Chairman, and Miss Emma H. Gunther, Teachers College, New York City, as Secretary and Treasurer.

The meetings included discussions for those especially interested in the administration of college dormitories, public school lunch rooms, dietary departments of hospitals, and other phases of institution work.

Courses of Instruction and Training for Institution Management was the topic for one session, with Miss Adelaide Nutting of Teachers College as Chairman. Representatives from the teaching staff of Cornell University, Pratt Institute, and Teachers College contributed to the discussion of courses as given in these colleges.

Several meetings were given over to the question of Cost of Foods in Different Institutions. A paper on Food Costs for the Department of Charities, New York City, by Mr. Henry C. Wright, was presented. One on United States Army Rations was prepared by Capt. Stuart C. Godfrey, U. S. Military Academy, West Point, N. Y. Mrs. Dewey of Lake Placid Club gave items of interest on Cost of Foods for European Soldiers. The problem of State Hospital Supplies was presented by Dr. R. H. Hutchings, Ogdensburg, N. Y. Besides these, the cost of feeding college students and the cost of food in private clubs were also included in the discussion.

One session was devoted to Hotel Economics with Mr. Melvil Dewey as Chairman. The problem of Standard per Capita Food Costs was discussed by Prof. Wm. M. Cole, Business Administration, Harvard University.

Important consideration was given the field of the dietitian, and among the contributors to this session was Dr. E. E. Butterfield, Bellevue Hospital, N. Y., who talked on Diet in Disease.

The Planning and Organization of the Cafeteria was presented and discussed. Other questions of interest to Institution workers included Housing of Self-Supporting Women in Cities, and among those who contributed were Miss Blanche Geary of the Y. W. C. A. of New York City; Mrs. Emily Beal in charge of the Nurses Home, Boston; and Mrs. M. Loomis of the Students' Union, Boston.

The meeting was one of great inspiration to all interested in the housing and feeding of large groups of people. No attempt here has been made to give more than a very brief, general outline, for it is expected that soon a complete program and proceedings will be printed.

Indiana Home Economics Association. The second annual convention of the Indiana Home Economics Association met in the Library of Purdue University and was called to order by the president, Mrs. Virginia C. Meredith. In opening the meeting she said that an extensive correspondence with persons in every section of the state indicates that many are now studying the home as never before in its relation to the welfare of the community, and as a field for the employment of their best powers. The president stated that under instructions from the last convention she had appointed a special committee to consider and report on plans for modernizing the home. Also, she had sent telegrams to the thirteen Indiana congressmen urging them to support the Smith-Lever act with its provisions relating to Home Economics.

The secretary-treasurer, Mrs. Lewis Taylor, gave a very comprehensive report of the last convention and stated that the membership of the association had more than doubled during the past year.

President Stone addressed the association on "The Future of Home Economics in Purdue University."

Dr. Carolyn Geisel made an inspiring address on "The Education of the Twentieth Century Woman." She declared that women must be educated for their business—the business of making homes and the business of being the mothers of men; that whatever hinders the right development of healthy children and efficient men and women should be made a subject of unremitting study and research.

The committees and various county clubs allied with the state association gave encouraging reports.

California Associations. The Science Teachers Club of Los Angeles held a luncheon on Saturday, May 22, at the Hotel Clark in coöperation with

the Manual Arts Association and the Pacific Conference. Full particulars may be secured from Helen Kuck, 2294 Garnet Street, Los Angeles.

The State Normal School of Manual Arts and Home Economics Branch of the American Home Economics Association held its regular meeting on Thursday, May 13. Miss Nina Forsythe, Director of the Domestic Art Department gave a talk on General Armstrong and his work at Hampton Institute. Miss Forsythe taught for seven years at Hampton Institute and five years at the Kamehameha Girls' School in Honolulu, Hawaii, so that she was able to give many most interesting personal reminiscences of General Armstrong and his pioneer work in trade schools among both the southern negroes and the native Hawaiians. The meeting was held in the millinery room where the work of one of the students was on exhibition. This included all the work done by the student in the Domestic Art Department during her twenty weeks' course. Besides the usual quota of garments, afternoon dress, evening gown, tailored suit, fancy waists and hats, the work in weaving which consisted of three runners and a rag rug, was especially commended.

The Home Economics Association of Greater New York arranged, during the past year, for the following series of lectures: Cleanliness, or Helpful and Harmful Bacteria, Dr. Cassius H. Watson; Solving the Hat Problem at Home, Mrs. Evelyn S. Tobey; The Incidental Teaching of Science, Miss Grace McLeod; Laundering as Related to Textile Study, Miss L. Ray Balderston; Our Clothes and Their Ancestors, Miss Mary Quinn; Modern Methods in Marketing, Miss Emma A. Winslow.

In addition to the series of lectures, a luncheon was held at the Hotel Martinique, with ninety-three in attendance. After the luncheon Mr. William Wirt outlined the scheme for a freer use of the school laboratories, playgrounds, auditoriums, etc., thus accommodating more classes in the New York City school buildings. Mrs. Rose Morgan, who goes through New York State encouraging the rural communities to hold to the old music and judge carefully of the new music brought into the home, sang a few snatches of negro melodies and made a brief analysis of each. At the end of the meeting she accompanied and led the group in singing some of the "Songs that Live" from pamphlets written by her and published by Cornell University.

Miss Lord, Miss Kinne and Dr. Andrews all spoke briefly.

Omicron Nu. The Iota chapter of Omicron Nu was installed at the University of Kansas, June 1. Miss Agnes Hunt of the Michigan Agricultural College was the installing officer.

At a business meeting held later, Miss Sybil Woodruff of Lawrence, Kansas, was elected president and Miss Margaret E. Lorimer of Olathe, Kansas, secretary.

New England Home Economics Association. On May 6, 1915, the New England Home Economics Association ended another successful year, which is the sixth in its existence.

The meetings planned by the three sections of the association have been conducted with gratifying results.

The Social Workers have had exhibits, and discussions concerning the preparation of foods of different nationalities, as the Americans, Greeks, Italians and Jews, and during the year have been favored by the following speakers: Mr. Shooshan of Shooshan's Restaurant, Mrs. Filedes, of the Greek Restaurant, Miss Shaw, of the Dennison House. In April Mr. Demarco and Mr. Paolera talked about the "Italian Customs and Standards of Living." One afternoon in March Rabbi Harry Levi gave a most interesting and instructive talk on "The Dietary Laws of the Jews," which we learned were all given for scientifically hygienic purposes.

The Homemakers' Section has discussed different home problems and interests, such as "Honest Furniture" led by Mrs. H. M. Chamberlain. "Home Gardening and its Help to the Housekeeper" as discussed by Miss Persis Bartholomew was very helpful and suggestive, and we concluded that if a girl in Broxton who planted, tended and sold vegetables could make \$60 on a piece of ground 50 feet by 20 feet some of us might reduce the expense of living by having vegetables all summer from a back yard 100 feet by 150 feet if we planted them in the right order and gave them the right care.

In February Mrs. L. B. Miller of Filene's store talked on "What a Dress Means when we Buy it." She wanted every woman to demand better quality and never to be satisfied with poor goods or poor construction in anything, as commercial houses cater to all real demands and are themselves anxious for the standards to be raised. On March 2 "Some Recent Changes in the Matter of Diet" was ably discussed by Miss E. Grace McCullough, dietitian of the Peter Bent Brigham Hospital.

The Teachers' Section has had informal discussions on various teachers' problems, such as the particular needs, and the important things to emphasize in training young girls who seek employment after graduating from courses in domestic science and domestic arts in our public schools, and has welcomed criticism and suggestions from employers in different branches of the work. On April 20 "The Science and Art of Bread Making" was presented by Dr. W. K. Dyer, originator and manufacturer of the healthful Cestus Bread.

Several open meetings have been held during the winter at the Twentieth Century Club. On January 25 Mr. John Graham Brooks gave a talk on "Coöperative Buying" which he considered the best and the most economical way of purchasing supplies for the home. He hoped we would patronize all coöperative stores whenever possible. On March 30 Mr. Henry S. Dennison gave an excellent talk on "Unemployment" and dwelt extensively on "Woman as a Purchasing Agent." He urged his hearers to do all they could to make it go out of fashion to be in style.

University Education of Women Fellowship. Miss Louise McDanell, assistant professor in the Division of Home Economics of the University of Minnesota, has been awarded the fellowship of the Baltimore Association for the Promotion of the University Education of Women for 1915-1916. This fellowship is available for study at an American or European university. Miss McDanell will study in the department of physiological chemistry at Yale. She is a graduate of the University of Nashville, of Leland Stanford Junior University, department of chemistry, and received her M.A. degree from Columbia, where she held a research scholarship in 1911-1912.

College Celebration. Vassar College will have a double celebration in October. It will observe on the one hand, the fiftieth anniversary of its opening, and, on the other, will inaugurate President-elect MacCracken. As is eminently fitting the keynote of the whole celebration will be the education of women—past, present and future.

The Home Economics Association of Philadelphia has planned, as work for the ensuing year, a questionnaire, composed of ten questions, covering each of the following subjects: Domestic Science, Domestic Arts, School Feeding, Institutional Dietetics, Occupations. The questionnaire was distributed among the members of the association before the end of June.

Members visiting various cities during the summer, volunteered to gather available information in each city.

During the winter each of the standing committees will have charge of a meeting, at which the results of the research work in one or more cities will be given.

In this manner, it is hoped to gain an insight into the work of Domestic Science and Arts elsewhere, and to compare it with what is being done in our home field.

THE
Journal of Home Economics

**For those interested in Homemaking, Institution Management,
and Educational Work in Home Economics**

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AMERICAN HOME ECONOMICS ASSOCIATION

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House and Garden



A Class on the Veranda

WINTHROP FARM SCHOOL, ROCK HILL, S. C. (see page 480)

THE Journal of Home Economics

VOL. VII

NOVEMBER, 1915

No. 9

PRESIDENT'S ADDRESS¹

MARTHA VAN RENSSELAER

Cornell University

If Mrs. Richards and the persons who were early concerned in the education of women for home makers had been told at the first Lake Placid meeting, that we should be two or three hundred strong upon the Pacific coast in 1915, there would have been not only great surprise, but wonderful gratitude. We evidently have started around the world from our meeting in Boston some years ago to the present meeting and perhaps a future meeting will be in the Philippines. We are perfectly willing to go around the world with Home Economics, and there is no more fitting subject to encircle the world than Home Economics.

How has it come about that we are in the elementary stages of Home Economics education when our foremothers knew so much about it, and it was the only education which they had; when they were the forerunners of household art and of science, though they did not know it? In primitive days savage men went out to fight and women stayed at home to cook, to make the raiment, and promote rudimentary agriculture; thus agriculture started as homemaking and whatever contributed to the welfare of the home was homemaking.

The story is a familiar one. The savage chief in chase and defense, his savage wife the originator and producer of utensils and foodstuff; the calling of men to pastoral life and the women to smaller agricultural pursuits; later, home manufacture of food and clothing in which the family have shared, the traveling cobbler and gradual

¹ Presented at the Eighth Annual Meeting of the American Home Economics Association, Seattle, 1915.

exchange of home made goods, the division of labor in which man took the agriculture and women the preparation of food, clothing, and the cultivation of home arts;—later, the development of machinery and the disappearance of home arts and economic justice in the family when each person was self-supporting; the organization of merchant guilds, and trades unions; the necessity of factory employment for women and children. Women and children entered this field untrained and serving as they always have the interests of employer and working with a possible idea of change to homemaking, they made a business of neither homemaking nor industrial work.

Then came the age of chivalry when by military command women and children were protected. With this came the age of romance, luxury, and sensuousness because without training or schooling women must appeal by their beauty, charm and ability to care for the welfare of man.

Then there came the revolution, the reformation and renaissance and as in every great revolution women grew in judgment and responsibility. Individualism asserted itself no less in women than in men. To cook, to sew, to clean, to keep accounts, to pray, to sing, did not then as it does not now satisfy women. The convents offered some education but not to all. Comenius, Erasmus, Rousseau dared to proclaim that women should be admitted to public education. Why go to school to cook, to sew, to spin when mothers had taught these arts always. Education in Home Economics was not then developed; science and art had not been applied to domestic affairs. It was taken for granted then and we have a similar surviving custom that girls need know no more than their mothers about housekeeping, and schools for that purpose were unnecessary. It was a more reasonable argument then when mothers and daughters were associated in household duties and when household servants were not common. Science was not ready for application to common things of the household; the science then offered to woman was not the science of bacteriology that would teach her how to keep the kitchen sink clean; it was not the science of chemistry that would teach her to make bread. To apply science to the life which the women would probably have to live was not considered. Teaching and housework were the main vocations offered to women. During all the time that work was finding its way into the factory, women and girls were left stranded should they wish to earn anything outside of factory life or teaching subjects which they had in school. For the work which was done

in the home, untrained workers were employed, and housework became unstandardized. Soon the world went wrong so far as domestic affairs were concerned, and people began to worry about the work of the household, and about the inefficiency of the workers. Women were advancing in literary training and going further and further from domestic education. Thus woman's work and education were separated.

Occasionally we hear of a woman who in early days was of special service to science. The rare exception was a woman who was interested in the stars or a similar quest.

The American Revolution brought about another state of uneasiness. The wives of John Quincy Adams and of James Madison, and other prominent men wrote and plead for woman's opportunity. Catharine Beecher, Mary Lyon, and Emma Willard gave their all to have the schools opened to women. When they were opened it was not to teach cooking and sewing, for mothers had taught it before; it was for that which women had not had in their lives. Later women's colleges were opened in the East. Again it was thought that higher education for women must not embrace what mother could teach at home. That was not what women were craving. It was language, history and mathematics—so called cultural subjects.

Agriculture, and mechanical arts have suffered the same historical record as Home Economics. Work with the hands even with the application of science has been termed manual and that direct from the book, cultural. Manual in some cases however came to be called menial. This led to a domination of the cultural as opposed to the noncultural subjects and a supposed corresponding difference in social importance.

To remove this stigma is the opportunity of the Home Economics teacher who regards the social phenomena from the study of food, shelter and clothing of importance equal to the material results.

To dignify the subjects by high aims, thorough knowledge, scientific research, economic and social justice is to make it worthy of any good institution of learning.

Agricultural colleges were established over the country. Domestic science became a part of the curriculum. Where this work was established at a university, men devoted to arts held up their hands in horror at what they termed "cooks on the faculty." But the subject prospered. High schools introduced Domestic Science in the same way and even there a line of demarkation has been drawn be-

tween the art students and those preferring vocational subjects, though this need cause no regret, for each needs the criticism of the other.

In all this history, education has too often been separated from work, to the disadvantage of both and with the result that in domestic affairs, work is unstandardized. With the removal of work outside the home, the lack of standardization in the home, and the unfortunate attitude toward housework because of this lack of training, we have an economic condition which threatens to revise our whole home fabric. Rooted deep in the hearts of the people, the home is secure but only with a better and more scientific foundation. While we condemn false standards and uneconomic home conditions we realize more than ever the need of an intimate home life for the happiness of men and women and the good of the children. It is only a question of revision and redefinition.

The old methods of homemaking have not satisfied women's ability. Education of the past has not pointed out the home as a laboratory for the science and art of the school, and woman has looked outside for her professional experience. Home Economics unlocks a vast and interesting laboratory and the result of the use of that laboratory is greater efficiency and a higher type of civilization, for "good citizenship is but an expansion of home ideals."

In the use of such a laboratory a teacher of Home Economics must be familiar with home problems as they exist for her and for those whom she teaches. Her single life adds to the incompatibility of teaching and living, which tends to separate education from work. Again there is an incompatibility between married and professional life because of the outside demands upon the time of the professional worker. The more the pity that this is so because it keeps a selected group of women out of marriage and motherhood where intellectual training is needed for the good of the race. Again the teachers of the world who would impress standards upon the coming generations should not be divorced from the practical work of the world of homemaking.

The purpose of Home Economics is to standardize home ideals. But since the home is the nucleus of all social life, the problems of Home Economics are not only those of the home but of the community. The ideals of community, state and nation all reflect back to home standards. I congratulate a body of teachers whose work is to standardize and professionalize the home.

NEED FOR UNIFORM LEAFLETS FOR EXTENSION WORK
IN HOME ECONOMICS¹

C. F. LANGWORTHY

Office of Home Economics, U. S. Department of Agriculture

The subject matter of Home Economics is the oldest in the world, but as a definite branch of learning the subject is very new. Yet it has been experimented with long enough to convince those who are familiar with it that it possesses all the elements of culture which the most exacting could wish, and that it has a further advantage in that it deals with matters of everyday life and so teaches the student how to live. The content of the subject is large. Its subject matter of necessity forms a part of kindergarten teaching (witness the stress which is laid upon these matters in a method of education for young children which is now attracting so much attention), parts of it are admirably suited for grade school and high school work, and it fills with dignity its place in the college and university, while other parts of the subject matter find their best application in the technical school and trade school.

The last few years have witnessed a great increase in the efforts to supplement formal education by less formal education taken directly to the people. It is natural that extension education in agriculture should occupy a prominent place in such a program, for agriculture is fundamentally related to the life of all the people. It is equally natural that Home Economics should accompany agriculture, for the home is the ultimate consumer of most of the products in agriculture. That the probationary period of extension education in agriculture and Home Economics is over is clearly evidenced by the passage of the Smith-Lever Act which now provides for such work under most generous conditions in every state of the Union, a project so far reaching in its possibilities that one can hardly see the limits of its usefulness.

While extension teaching in Home Economics is somewhat new in the United States, it has nevertheless made some considerable progress. The work grew up in different places and under different auspices, and so it is not surprising to find that materials and methods used in the work have also varied. Now that the Smith-Lever Act

¹ Presented (by title) at the Eighth Annual Meeting of the American Home Economics Association, Extension Section, Seattle, 1915.

has given so great an impetus to the work, it is important that those interested in it should take stock of their resources and plan for their future needs. One of the most important of these is an adequate supply of literary material on which to draw for purposes of instruction—literary material which embodies not only the housewife's experience but the results of laboratory test and technical studies. There are many technical works of reference on Home Economics and many text books, on one phase or another, suitable for classroom instruction and a very large number of books and pamphlets, some of them excellent, prepared for grade school use and for similar purposes. Some few of these deal with the general principles of Home Economics, usually laying stress particularly upon food and nutrition, textiles and clothing, and hygiene and sanitation. The simpler ones very often are limited to cooking and sewing with brief excursions into other matters. It is not too much to say that there is no complete and uniform series of texts which deal with the whole question of Home Economics. This is not surprising when one recalls the newness of Home Economics as a pedagogical subject and the great extent of the material which can properly be included in it. The *Syllabus of Home Economics*, which represents coöperative work between this Association and the Department of Agriculture, may be cited in proof, for the date of this, the first reasonably complete synopsis, is 1913, and the list of topics it includes is a very long one.

No one will deny that the extension teacher needs an abundance of printed material. Furthermore, it must be concise, stated in simple language, and well balanced. Is it not possible for us to select from existing material, to experiment for additional facts, and prepare the texts which are needed? If we will all work together we can certainly better existing conditions and succeed.

Naturally the form of the material must be decided upon before such an enterprise can go very far. The leaflet for instruction purposes seems to have been in the minds of many workers and this is natural since it is familiar to every one and has proved itself of the greatest value in Sunday School work where it has been developed systematically and has been used for something over forty years. I think the majority will agree that it is the best form of printed material for general use in extension work.

(Those who think of "chance and circumstance" may be interested to recall that the leaflet plan is theirs by inheritance, for it owes its

adoption in Sunday School work to Dr. Peloubet, father of Mrs. Alice Peloubet Norton who will, I am sure, share it with us and help us to make the best use of it.)

The ideal which we should have in mind if we are to carry out the plan consistently, calls for a series of leaflets covering the whole field of Home Economics as outlined in the *Syllabus of Home Economics* or an extension of it, which the future will no doubt bring forth. This would mean a very large number, since in many instances several leaflets per topic would be required. Also different leaflets would be needed for use in different regions. For instance, leaflets designed for the Southern States would necessarily deal with products which are common there but unknown or not common in the North and those designed for instruction in remote rural regions far from markets would differ from those for villages and towns with numerous and well stocked shops. However, one should not be appalled at the task, for what is most needed must be given attention first and much that is very urgent can be prepared without great difficulty. With so many workers in the field there is no reason why the output of teaching material should not keep pace with the development of the work.

If we should agree that it is desirable to adopt such a plan as the one suggested, ways and means must be considered. The first step would be a collection of existing material used in extension teaching. Each extension worker should be requested to contribute whatever she has, whether manuscript or printed matter, and to accompany her material by notes which relate her experience with it—whether the material has been found adequate, how much interest it has aroused, what changes she would suggest, what she considers should be the maximum length for a leaflet. She should be asked also to enumerate the topics which the workers most need to discuss. Efforts should also be made to collect school texts, which are already so numerous, and also the popular pamphlets such as those issued by the General Government and in connection with state work; for instance, the Department of Agriculture Farmers' Bulletins, and the *Reading Course for Farmers' Wives*, issued at Cornell. Then, too, we must remember that very valuable material in form as well as in substance has appeared from time to time in publications of agricultural experiment stations, pure food laboratories, state boards of health, and similar agencies. And there are the publications of the Home Eco-

nomics departments of the General Federation of Women's Clubs and of the National Grange. Wherever there are workers, we must enlist their coöperation. Much of the material referred to has been prepared for gratuitous distribution. There are also the numerous text-books which have appeared in the regular publishing trade and the material appearing in periodicals—popular, scientific, and technical. The material could be brought together and classified. Out of this mass of material some competent body should select the models which are most promising and should plan a campaign which would result in securing additional material. The committee could then decide upon a list of topics which should first receive attention and make definite suggestions as to the length of the articles, their content, etc., and by means of circular letters could call for volunteers to prepare the articles or could ask individuals who are known to be especially familiar with different phases of the work to do so.

The committee would then be faced with the task of editing the material in order that it might be reasonably uniform and should adopt every available means to make sure that the language is simple and the statements accurate, that no points are overemphasized, that proper balance is maintained, and that all principal points are taken up instead of one or two which a writer may have especially in mind. After the editorial work would, of course, come the question of publication.

If carried to anything like a successful conclusion, such a project would result in the accumulation of a large amount of material and call for very large editions. No agency could handle such a matter as this so well as the General Government which would seem the natural publisher of the work. Since it already fosters the greatest organized effort for extension education which exists (the work done under the Smith-Lever Act), it seems logical that it should provide the printed text for use in its own work.

Cannot agricultural colleges, experiment station workers, teachers in public schools, the Department of Agriculture workers, and others unite in this enterprise? If we group these together, would it not mean coöperation between the American Home Economics Association and related organizations, and the Department of Agriculture, which by law is charged with the Smith-Lever Act? It would seem that every one having an interest in extension work in Home Economics would wish to help such a plan as this in every way possible.

RECENT CONTRIBUTIONS TO THE FOUNDATIONS OF
DIETETICS¹

RUTH WHEELER

Department of Household Science, University of Illinois, Urbana, Ill.

There was a time when the science of dietetics was hampered in its development by the lack of accurate information about the processes of nutrition. It had to wait for physiology and physiological chemistry. Now, the difficulty is rather to acquire even the most superficial acquaintance with the discoveries reported in January publications before those of February are upon us. Digestion and assimilation of the material are all but impossible and yet both must be accomplished if our science is ever to be the supremely important division of classified human knowledge it should become. This subject should include preventive dietetics which shall be first assistant to eugenics in perfecting the race, and curative dietetics which shall to a considerable extent replace what the medical association has called unnecessary and probably dangerous drugs, in remedying disorders of metabolism. Even now, it is often possible by dietetic measures alone to cure such difficulties as hypo- and hyper-acidity, gastric and duodenal ulcer and many other disorders; decrease greatly the seriousness of typhoid fever, diabetes melitus and gout. It is evident that for its optimum development, dietetics must in the first place have the close coöperation of workers in many lines: chemists, physiologists, physicians, dietitians, government experts, food manufacturers, teachers and housekeepers; and secondly it must assimilate as promptly as possible the accomplishment in all the fields indicated.

The last year has been a prolific one in spite of the lessened output of European laboratories. Discussion of the whole field is out of the question—there is far too much of it; and so in order to unify the material somewhat, only such investigations have been considered as are related more or less closely to two topics which have stood out conspicuously in the year's literature: energy exchange and growth.

On the food side of energy exchange, there has been one notable contribution—Gephart's *Analysis and Cost of Ready to Serve Foods*, in which 242 individual portions of cooked foods as served by Childs Restaurants are analyzed, their fuel value determined, and a table

¹ Presented at the Eighth Annual Meeting of the American Home Economics Association, Science Section, Seattle, 1915.

given showing the relative cost of 2,500 calories in various food combinations from baked beans and bread and butter to deviled crab.

There have been so many arguments about the amount of food the body requires, so much discussion of the Atwater standard and the Chittenden standard, that it is a relief to find as great an authority as Graham Lusk giving figures which he says "are facts which at the present time are scarcely open to dispute."²

Daily caloric requirements of 156-pound man

	Calories
Absolute rest in bed without food.....	1,680
Absolute rest in bed with food.....	1,840
Rest in bed, 8 hours, sitting in chair 16 hours, with food.....	2,168
Rest in bed, 8 hours, sitting in chair 14 hours, walking 2 hours, with food.....	2,488
Rest in bed 8 hours, sitting in chair 14 hours, with vigorous exercise 2 hours, with food.....	2,982

As these figures indicate, the amount of fuel needed by the body depends first upon the activities of the whole organism, of the body as a unit; not only upon whether one does hard labor or leads a sedentary life but upon less obvious considerations brought to our notice by the very valuable work being done in the calorimeters in the Carnegie Nutrition Laboratory, the Russell Sage Institute, and elsewhere. A clerk who works sitting down needs less food than one who does the same work at a high desk, standing. Murlin and Hoobler³ find that hard crying increases the metabolism in babies 40 per cent. Cold baths use up the body's glycogen reserves which must be replaced by more food. All this does not mean that we must watch every muscle and compute the number of calories we must provide for the next motion, but it does mean that it is quite as serious to keep too close to the minimum as to over-eat; it means most of all that there is accumulating accurate information on which to base calculation of dietaries, especially for two classes of people: those who must perforce eat what is set before them—babies and inmates of some institutions; and those whose incomes preclude the possibility of much margin.

The food requirements depend largely upon the activities of the body as a unit but quite as largely upon the activities of the indi-

² F. C. Gephart and G. Lusk: *Analysis and Cost of Ready to Serve Foods*. Chicago: Amer. Med. Assoc., 1915, p. 15.

³ J. R. Murlin and B. R. Hoobler: *Amer. Jour. Diseases Children*, 9 (1915), no. 2, pp. 81-119, figs. 10.

vidual cells which make up its tissues, that is upon a group of factors which influence its *basal metabolism*, the activity of the cells when the body as a unit is at rest. Here again there is a great need for definite data as opposed to supposition based on teleological reasoning. There is some reason to assume that cells are more active in children than in elderly people; that men need more food than women of equal weight living the same lives; that much protein is needed for growth—but, oh, for proof! Prof. Martha Tracy⁴ of the Women's Medical College of Philadelphia found that the basal metabolism of women, measured by the creatinin output on constant diet, *was* lower than that of men except in the case of some athletic women in whom it was closely similar to the average for men. The initial loss of weight in new born babies has this year been studied with real accuracy of method. Benestad⁵ of Christiania found it to be due to insufficient metabolism and to be remedied to some extent by supplemental (bottle) feeding. Bailey and Murlin⁶ have gone further. By actual determinations in the calorimeter of the baby's needs on the one hand and on the other of the food value of the colostrum, the first milk secreted by the mammary glands of the mother, they have found that even with perfect utilization the baby cannot get sufficient food to prevent loss of weight. In most cases the loss is temporary and slight and is compensated by later overgrowth, but in some cases it is serious, and in all the babies studied, it could be lessened and the return to birth weight hastened by supplemental feeding with a liquid resembling the colostrum in composition. The trouble here is due less to low power to metabolize than to underfeeding.⁷

These facts are valuable in themselves but to us who want to use them in application, as part of the basis of the coming science of dietetics, perhaps the accuracy of method is even more appealing than the results. One feels quite sure that the metabolism work of today has permanence and will make a good foundation.

One of the most useful foundation stones is the determination of the basal metabolism in man, the total activity of the tissues when the body is at rest, by measuring the amount of oxygen used up, the

⁴ Martha Tracy and E. Clark: *Jour. Biol. Chem.*, 19 (1914), no. 1, pp. 115-117.

⁵ G. Benestad: *Jahrb. Kinderheilk.*, 80 (1914), no. 1, pp. 21-41.

⁶ H. C. Bailey and J. R. Murlin: *Proc. Soc. Expt. Biol. and Med.*, 11 (1914), no. 4, pp. 109-111.

⁷ T. B. Robertson: *Amer. Jour. Physiol.*, 37 (1915), no. 1, pp. 74-85.

amount of carbon dioxide formed, the nitrogen excreted, and the heat generated by the body. The amount of the basal metabolism must depend upon the total amount of active tissue,⁸ muscular, glandular and so on, not including fat which is not active. The fat person needs less food than the thin one of the same weight and leading the same life. Theoretically that is reasonable; but how shall it be expressed; in terms of weight or in terms of area of body surface? Neither will be quite accurate. Several papers published this year indicate that for adults the metabolism is best expressed and therefore the necessary food best computed in terms of area of body surface—34.7 calories per square inch.⁹ The Doctors Dubois¹⁰ of Bellevue Hospital and Russell Sage Institute of Pathology have worked out an accurate formula for computing surface area, but it is far from simple or easy to use. Perhaps simplicity is impossible. Fortunately for mothers, Murlin and Hoobler³ find that for babies there is less error in computing the amount of food needed on the basis of weight than in using surface as the basis. Benedict and Talbot⁸ concluded that neither weight nor surface is really satisfactory.

An exceedingly interesting outline of the development of calorimetry since 1850, is given by Prof. Graham Lusk¹¹ in a recent paper.

The plane of metabolism, i.e., the ordinary activity of the tissues when the body is at rest, is, however, definitely influenced by several factors. *Exercise*, for example, not only creates a demand for more fuel to supply the immediate need, but it has a lasting effect upon the activity of the cells, i.e., on the basal metabolism. Dr. Tracy's data concerning metabolism in women lead one convincingly to this conclusion, and a dog used by Dr. Lusk in metabolism work showed a higher basal metabolism in the autumn after an active summer.¹² One might say that a person who lives a muscularly active life is altogether more alive—his cells are more active. (There is much more evidence in favor of this view.) *Disease* also alters the plane of basal metabolism. Diabetes mellitus increases it 5–10 per cent, and even,

⁸ F. G. Benedict and F. B. Talbot: The Gaseous Metabolism of Infants, *Carnegie Inst. Washington*, Pub. 201 (1914), pp. 168, figs. 65.

⁹ F. G. Benedict, L. E. Emmes, P. Roth and H. M. Smith. *Jour. Biol. Chem.*, 18 (1914), no. 2, pp. 139–155; 20 (1915), no. 3, pp. 253–262.

¹⁰ F. C. Gephart and E. F. Dubois: *Arch. Int. Med.*, 15 (1915), II, pp. 835–867. D. and E. F. Dubois: *Arch. Int. Med.*, 15 (1915), II, pp. 868–881.

¹¹ G. Lusk: *Arch. Int. Med.*, 15 (1915), II, pp. 793–804.

¹² G. Lusk: *Jour. Biol. Chem.*, 20 (1915), no. 4, pp. 555–617, pls. 15.

in individual cases, 15 per cent.¹³ Typhoid fever involves 40–50 per cent increase.¹⁴ No wonder the death rate from typhoid was so high in the days when this tremendous need for fuel was supplied by giving less than half the food used in health! Only the patient with large reserve could survive.

Food also affects the plane of basal metabolism. The increased heat production after eating, called the specific dynamic action of foodstuffs, has been variously explained. Voit (1881) thought it due to the stimulation of the cells by the presence in the fluid about them of products of digestion; Rubner held that basal metabolism was constant, fed by the end products of digestion, glucose especially, and that the increased combustion evident after a meal was due to the intermediary changes necessary to transform the food or the products of alimentary digestion into the simple forms which the cells could use—as if a furnace burned coke only and the coal were partially burned outside it, wasting so much of its heat, until coke was formed. Zunz taught that the specific dynamic action of foodstuffs was all due to the work of digestion, and so convincing was his argument that many of us even now have remnants of that idea in the back of our minds: that some foods are harder to digest than others and so cause the evolution of more heat; and yet Benedict and Emmes¹⁵ in 1912 and Benedict and Pratt¹⁶ in 1913 demolished that theory.¹⁷

In the presidential address¹⁷ cited, and in a paper on this specific subject, Professor Lusk¹² reports investigations that settle the question and provide another perfectly solid foundation stone. By giving separately glucose and various substances (amino acids) formed by the digestion of protein, Lusk and his coworkers have proved that the specific dynamic action of foodstuffs is due to the action of katabolites of those foodstuffs, thus confirming and extending Voit's view. The argument is most interesting but we can consider only results. When the digestion products of fat or of carbohydrate are carried by the blood to the tissues, basal metabolism is increased, the activity of the cells is greater, just because of the presence of a

¹³ F. G. Benedict and E. P. Joslin: *Metabolism in Diabetes*, *Carnegie Inst. Washington*, Pub. 130 (1910), pp. 234.

¹⁴ W. Coleman and E. F. Dubois: *Arch. Int. Med.*, 15 (1915), II, pp. 887–938.

¹⁵ F. G. Benedict and L. E. Emmes: *Amer. Jour. Physiol.*, 30 (1912), no. 3, pp. 197–216.

¹⁶ F. G. Benedict and J. H. Pratt: *Jour. Biol. Chem.*, 15 (1913), no. 1, pp. 1–35.

¹⁷ G. Lusk: *Jour. Biol. Chem.*, 20 (1915), no. 4, Proc., pp. VIII–XVII.

large amount of fuel; the products of protein digestion also stimulate metabolism but in a different manner and to a much greater degree, acting as direct stimuli rather than as fuel.

GROWTH

A large proportion of the problems of nutrition are being approached from the standpoint of growth: the optimum percentage of protein in the diet for example, the comparative value of different proteins, the extent to which protein synthesis is possible in the animal body, mineral metabolism, the nutritive importance of fats and the fascinating but still very hazy problem of accessory substances, lipoids, lipins, vitamins.

Growth is not entirely a matter of proper food; the growth impulse is inherent in the cell and seems to be influenced by the secretions of some of the ductless glands; but without proper building material growth is impossible and animals stunted far beyond the ordinary growth period of their species have made up for lost time and attained normal adult size and weight when proper food was given.

As yet we know very little about the character of growth. Professor Robertson¹⁸ of Berkeley has recently published an extremely interesting study of growth in the human infant. He finds that growth proceeds in cycles as is the case in other animals; that some post natal loss of weight or at least a decreased rate of gain is characteristic of the baby as of all mammals; that the body is in "dynamic equilibrium," disturbances in growth being rectified by internal regulation, a period of subnormal growth being followed by compensatory overgrowth—a phenomenon familiar in studies of growth in animals.

Views of growth have developed most interestingly since attention has been directed to the bearing of nutrition upon it as is evident in the historical outline prefaced to Professor Mendel's¹⁹ Harvey lecture last winter. Voit, in his great pioneer discussion of the subject in 1881, said that the growth period was characterized by great constructive power, slight destructive activity, and the need for a large amount of food, especially of protein. He thought the food passed from the

¹⁸ T. B. Robertson: *Amer. Jour. Physiol.*, 37 (1915), no. 1, pp. 142; 74-85.

¹⁹ L. B. Mendel: *Jour. Amer. Med. Assoc.*, 64 (1915), no. 19, pp. 1539-1547, figs. 5.

digestive tract to the tissues practically unchanged. Rubner, some twenty years later, in the light of investigations carried on in the meantime, asserted that all the characteristics of growth mentioned above had been over-emphasized. His own studies showed that for a baby, only 7 per cent of the total energy intake need be protein (5 per cent for maintenance). He pointed out the importance of the total energy intake and said that growth takes place just as soon as there is more building material at hand than is needed for the replacement of wornout tissue—a view that has received confirmation from some work of Dr. McCollum²⁰ this year.²¹ Abderhalden attacked the problem of the form in which building material reaches the cells and did a great deal toward establishing our present view—that the cells know nothing of the food we eat, since digestion involves profound changes. Folin, Denis and Van Slyke continued the gathering of material which forms another important foundation stone. Only small fragments of the food reach the cells: glucose and other simple sugars from the starch, amino acids and perhaps small combinations of these from the protein, and so on. The final proof of this comes in the feeding of nothing but these products of digestion, a very difficult laboratory problem. Abderhalden has accomplished it, however, and his animals gained weight on the diet. Dr. Mitchell²² at the University of Illinois fed such food to mice with excellent results so far as maintenance is concerned. He has not yet secured growth, I think.

There is no doubt that if we want to know whether wheat proteins are as valuable for growth as the proteins of milk or of meat or of oats, the answer lies in their amino acid content. Cane sugar is a simple thing, relatively; in digestion it is broken down into two kinds of building units or fuel units, which the cells can use (one kind probably has to be changed a little first), but protein is a whole building, made up of many building units of many kinds. In order to build tissue out of the protein of the food, the building units must all be separated (in the digestive tract). Some proteins have a large amount of one kind of material and none of another kind which is perhaps

²⁰ E. V. McCollum and Marguerite Davis: *Jour. Biol. Chem.*, 20 (1915), no. 3, pp. 415-428, figs. 12.

²¹ T. B. Osborne and L. B. Mendel: *Jour. Biol. Chem.*, 22 (1915), no. 2, pp. 241-258. [Published since the above was written.]

²² H. V. Mitchell, unpublished.

essential for the building of tissue. If the body has the power to synthesize the lacking unit, all is well; if it has not that power, then unless some other food supplies it, growth, or perhaps even maintenance, is impossible. A whole volume of important problems are suggested by merely stating the condition of things, and there are three chief ways of attempting their solution. One may feed mixtures of building units, amino acids with fat and carbohydrate and mineral matter and by supplying or omitting one or another, study its importance in nutrition; one may feed mixtures of pure starch, fat and salts, with a single protein added at a time, and study the effect of the particular combination of building units represented by that protein; or one may feed naturally occurring foods, one at a time, for example, a ration made up entirely of corn products or of wheat products. Each of these methods has its distinct and very great value.

Osborne and Mendel,²³ feeding single proteins to which amino acids were added singly and in groups, have shown the importance of several of these building units. Zein, a corn protein, is insufficient to maintain life; with the amino acid tryptophan added it allows maintenance but no growth, with lysin added it allows growth also. Maize glutelin, another corn protein, sustains normal growth. Hart and McCollum²⁴ find that the mixture of proteins in corn as they exist in the grain are entirely adequate for growth. The total mixture of amino acids in the corn gives the tissues all the kinds of building units they need *as far as protein units* are concerned. Wheat contains one protein, gliadin, which is adequate for growth; it lacks the essential amino acid lysin; when this is added to gliadin food, growth takes place, but whether for lack of lysin or of some other essential building unit, the whole mixture of proteins in the wheat grain is not quite adequate to sustain growth.²⁴ The addition of single amino acids has not been tried, but 10 per cent or less (of total ration) of casein made the total amino acid mixture satisfactory. If an essential amino acid is present even in small amount in a food, one could get enough of it by eating enough of the food. Of course, that would mean eating an excess of some of the other building units which the body would have to get rid of or burn as fuel. The value of individual amino acids can be shown in an analogous way. Edestin fed as 18 per cent of the ration allows rapid growth; fed as 9 per cent

²³ T. B. Osborne and L. B. Mendel: *Jour. Biol. Chem.*, 18 (1914), no. 1, pp. 1-16.

²⁴ E. B. Hart and E. V. McCollum: *Jour. Biol. Chem.*, 19 (1914), no. 3, pp. 373-397.

of the ration growth is much slower; but the addition of lysin accelerates the rate of gain decidedly.²⁵ Another important amino acid is the sulfur-containing cystin, whose effect on growth has also been shown by Osborne and Mendel,²⁶ by adding it to a casein ration. Nine per cent casein allows little growth in rats but with cystin added compensatory overgrowth occurs in animals stunted by the diet mentioned. Cystin may also be responsible for the effect of feeding blood albumin²⁷ (which has a high cystin content) to pregnant swine. The offspring were larger and stronger than the controls, whose diet did not contain blood albumin, and their hair was thicker and darker. If cystin could only be served in a more attractive form, some human beings would be glad to take advantage of Dr. Evvard's discovery.

McCollum²⁸ has suggested an ingenious method of comparing different proteins as to their nutritive value. If a protein is fed which contains all the amino acids the body needs and contains them in the right proportions, the whole protein will be retained, assuming that it is completely digested and absorbed. If there is too little of an essential amino-acid, say one-fourth the amount necessary for the construction of new tissues, only one-fourth of the entire amino acid mixture can be used. This at once suggests the economical advantage of knowing what is lacking from an inadequate food that one may supply it and so utilize the maximum amount of the ration, especially the expensive protein part of the ration. Two inadequate foods may supply each other's deficiencies and make both useful. It is possible to determine with probable accuracy the amount of protein required for maintenance; the difference between this value and the total amount of protein retained gives the amount used for growth. Now, if 75 per cent of one protein is retained for growth and only 25 per cent of another, the former is a much more economical building material to feed to a body long stunted and in need of rapid and easy tissue construction. The comparative nutritive value of proteins is not a very large foundation stone as yet, but it is going to be a very valuable one. McCollum concludes from

²⁵ T. B. Osborne, L. B. Mendel, Et Al.: *Jour. Biol. Chem.*, 20 (1915), no. 3, pp. 351-378, figs. 10.

²⁶ T. B. Osborne, L. B. Mendel, Et Al.: *Jour. Biol. Chem.*, 20 (1915), no. 3, pp. 351-378, figs. 10.

²⁷ J. M. Evvard, A. W. Dox, and S. C. Guernsey: *Amer. Jour. Physiol.*, 34 (1914), no. 3, pp. 312-325, figs. 5.

²⁸ E. V. McCollum: *Jour. Biol. Chem.*, 19 (1914), no. 3, pp. 323-335.

his studies that "the protein mixture occurring in the wheat, oat or corn kernel is chemically inferior to casein alone or to the protein mixture afforded in milk; that the protein mixture in each of these grains is, singly, adequate chemically for the complete formation of the specific proteins of the pig's body, although quantitatively, the possibility for this conversion is relatively low." Twenty-three to 24 per cent of the protein of the grains was retained for growth, 45 to 51 per cent of casein and 63.27 per cent of milk proteins—the mixture in milk.

If we look at protein assimilation from the view points established by recent investigations, we can understand how equally well informed scientists have differed so radically as to the requisite proportion of protein in the diet. It depends upon the protein. With the varied diet common in this country, the possible range of per cent of protein may be wide. Indeed that has been proved in animal experiments. Rations containing from 12 to 34 per cent of protein have been successful in sustaining growth, while maintenance rations may range from a minimum of 3 per cent. If one is looking for a finished block, studies of mineral metabolism are even less satisfactory than those of the proteins, but remarkable progress has been made this year. Evvard in the research already quoted²⁷ found that the feeding of the calcium compounds to pregnant swine increased the size and the relative weight of the bones of the offspring. Hart and McCollum²⁸ found that the inadequacy of corn to serve as an exclusive ration was due not to its proteins but to its mineral content. When salts were added to make the total mineral content of corn like that of milk, growth was perfectly satisfactory. A similar mineral modification of wheat was not sufficient—casein must be added also and even then the ration was incomplete; but wheat could furnish 80–90 per cent of the ration. From such studies as these McCollum²⁹ has come to the conclusion, supported by convincing evidence, that an alkaline balance is not necessary to health or growth or well being. On the other hand, Blatherwick³⁰ finds that "foods which have a preponderance of basic elements lead to the formation of a less acid urine" and the converse is also true. "All urines with an acid reaction are supersaturated with uric acid, while alkaline urines are capable of dissolving uric acid." Acidity is decidedly decreased by potatoes, oranges, raisins, apples, bananas and cantaloups and increased

²⁹ E. V. McCollum and Marguerite Davis: *Jour. Biol. Chem.*, 21 (1915), no. 6, pp. 619, 620.

³⁰ N. R. Blatherwick: *Arch. Int. Med.*, 14 (1914), no. 3, pp. 409–450.

by rice and whole wheat bread. "Prunes, plums, and cranberries, although yielding a basic ash nevertheless increase the acid formation" because of the presence in them of benzoic acid which is excreted as hippuric acid instead of being burned in the body to a carbonate as is the case with the acids in oranges, lemons, etc.

The study of fats in nutrition has come to be entangled with the study of the elusory accessory substances, lipins; lard, olive oil, almond oil, cottonseed oil have proved unable to sustain normal growth when added to a fat-free but otherwise adequate diet. Butter fat, cod liver oil, the oil from corn and wheat embryos, from egg yolk, from the kidney, or from beef fat are adequate.^{31,32}

SUMMARY

To summarize, the biochemical and medical literature of the past year is rich in material of great value to dietetics. There are accurate determinations of basal metabolism in men and in babies, of the effect of diabetes mellitus, typhoid fever and long continued effect of exercise upon the plane of metabolism and a really convincing explanation of the specific dynamic action of food stuffs.

There have been valuable investigations of all of the classes of foodstuffs from the standpoint of nutrition in growth. Proteins have been studied in groups as they occur in natural foods and in isolated form; additions have been made to our knowledge of the nutritive significance of individual amino acids and in this way light has been thrown on the reasons for differences in the value of different proteins in growth.

The importance of the character of the mineral intake has received emphasis from several points of view: the influence of the mother's food on the offspring; the effect of a basic balance in the ash of the food upon the solubility of uric acid in body fluids and the ability of the urine to hold uric acid in solution, the significance of the mineral content of some cereals upon the value of these grains as exclusive rations.

Fats have been shown to vary decidedly in nutritive value, due probably not to the fats themselves, but to admixtures in them of traces of essential accessory food substances.

³¹ T. B. Osborne and L. B. Mendel: *Jour. Biol. Chem.*, 20 (1915), no. 3, pp. 379-389, figs. 6.

³² E. V. McCollum and Marguerite Davis: *Jour. Biol. Chem.*, 21 (1915), no. 1, pp. 179-182, pls. 9.

THE WINTHROP FARM SCHOOL

HETTY S. BROWN

Principal, Winthrop Farm School, Rock Hill, S. C.

The idea of an experimental rural school to work out some of the problems that confront the rural schools of our country seems to have originated in the minds of three men just at the same time. These three men are, our president, Dr. D. B. Johnson, Dr. A. P. Bourland, at that time secretary of the Peabody Board, and Prof. W. K. Tate, who was then supervisor of the rural schools of our state. It was agreed that the ideal location for the school was Winthrop College, for the president, Dr. Johnson, has always identified himself with every movement for the uplift of our rural population.

The school began work in the spring of 1911. Except for the first four months, the College has supplied all the funds for maintaining the school.

Dr. Bourland voiced the aim of the school in one of his letters, written just at this time relative to the founding of the school. He says:

Is it not our duty to see clearly, first, what the farmer must do all his life; and what the farm-wife must do all her life; and second, regardless of books, to make a school that will train the farmer and his wife to do their work in the home, on the farm, and in the social life of which they are units? Our course will consist of a series of activities and experiences in organic succession growing out of the everyday life of the child. Our problem is to guide the free natural activity of the child, at the same time teaching him and developing him.

Our plant consists of an old farm house, playgrounds, a garden and a field on one corner of the campus. The open country stretches away in the distance, and there is a wonderfully attractive country look and feeling about the place.

Each day a covered wagon is sent out and the children are brought in from the country district that is seen stretching away from the school. Twenty-five children are in the school, and an idea of what they are doing is given in the succeeding paragraphs.

In September and October the fall garden was made. The vegetables planted were parsley, carrots, turnips, spinach, radishes (winter and spring), parsnips, lettuce, and onions. Strawberry

plants, cabbage and collards were also planted. Sweet pea and poppy seeds were sown, and jonquil, narcissus and hyacinth bulbs were put out. All of these are only waiting for the first warm spring days to set them growing.

Last year we realized ten dollars from the sale of lettuce from the cold frame. Estelle, the treasurer, kept our bank account straight for us.

There was such a demand for onions that we decided to make an experiment of raising them for the market. A strict account of the money expended in the raising of the onions is being kept, and just as strict an account will be kept when they are sold.

The lettuce, onions, and borders are worked in common and the money made is used for the school. We used fifteen dollars of the money earned last year for books to add to the school library. In addition to this we bought our own drawing materials and a few other things needed in the school.

We are proud of the sale of our vegetables, but the enjoyment we get from watching them grow, and then preparing and serving them for lunch far outweighs the commercial value. It is in the kitchen and at the lunch table that some of our most valuable lessons are learned. The children are happy, too, when there are more vegetables than we need and they can take some home with them. Sometimes there is a new vegetable, and after learning how to prepare it at school, the children are anxious to take some home for Mother to try. Then Mother must have some of the seeds of the new plant.

In this way the school can coöperate with the home. Each year an attempt is made to plant a vegetable unknown in the community, and thus to introduce the variety that is so much needed in the home garden. One year we tried beans, that were to be used as dried beans in the winter. Another year we tried German radishes; Dr. Bourland sent to Leipsic for the seed. Another year we tried Swiss chard and last year we tried dasheens.

When the seeds are ripe they are gathered and put away for the next year. Each child makes two seed envelopes, one is kept for his own garden next year, and one is taken home for use there. The seeds saved last year were radish, poppy, sweet pea, hollyhock, zinnia, cosmos, and four o'clock. In addition to saving the seeds we rooted some rose and geranium cuttings for the home. We

also got some plants of standing honeysuckle and althea by layering.

The home coöperates with the school, too, for the home gardens furnish us many things. Last spring beet, pepper, and cauliflower plants were brought and quite a collection of flower seeds saved the summer before. The collards, now in our garden, were brought by John last fall, and Crawford has already brought a pod of pepper for our pepper seed this spring. The forsythia plants, growing by the garden fence were brought and put there by Annie May.

Soon the pupils will be busily planning the spring gardens. This consists in making accurate measuring lines, markers, etc., so that the garden making may be done in a business like manner. In the winter boxes are made and seeds of the tender plants sown indoors so that they will be ready to set out as soon as the danger of frost is over. These plants are tomatoes, cabbage, and pepper, together with a number of varieties of hardy flowers. A plan of the garden has been made on which the plants now growing are marked and places for the new seed to be sown and plants to be set are indicated. Various seed catalogs were studied for the best varieties, the seeds are ordered and will be on hand before planting time. With a planting table as our guide as well as our past experience in making a garden, we plant each vegetable as the proper season comes around. Fortunately in our climate we can have fresh vegetables from the garden the year round.

Some lessons in agriculture are based on the soil. The content of the soil is studied and experiments made to determine the amount of moisture and humus in the soil. The soil makers are also studied and observations made of how each agent works. These are followed by experiments to learn the behavior of water in the soil.

In the late winter and early spring the children study buds and are ready to discover the underground bud of the white potato when its planting time comes. A chart is kept on which a record is made of each spring flower as it blooms.

The cooking consists in preparing the midday lunch, in which all participate, and more formal lessons in cookery for the larger girls only.

One hot dish is prepared for lunch each day. Whenever possible, this is something from our garden. Vegetables, such as carrots, turnips, radishes, onions, and potatoes, are delicious served with white

sauce. The soups are easily made and a greater part of the materials comes from our gardens. Lettuce, served with a cooked dressing, is quite a favorite dish. Beets are boiled and served with butter and sugar. Spinach and other greens are boiled with a bit of salt pork and served for lunch occasionally. Potatoes, both white and sweet, can be baked by the youngest children. In winter we enjoy the pumpkins that we raise in our field in summer. Pop corn and peanuts, also, give variety to our lunch.

The coöperation between school and home goes on in the cooking just as it does in the gardening. Annie May brought a citron melon with the recipe for making it into preserves. We used the recipe with the addition of lemon and cinnamon. Annie May's mother said she liked the amended recipe. The children are encouraged to report the part they take in the housekeeping at home. There is usually some one to tell each day of some cooking done.

In sewing we make those things for which a real need is felt. Towels are hemmed, sewing and cooking aprons are planned and made, and we have even attempted a cap and a dress for the baby.

Our carpentering consists of making with the simplest tools the things needed in gardening, such as stakes, markers, etc.; and cabinets for holding materials, bookshelves, etc., for use in the school room.

An attempt is made to connect the activities with the more formal studies. The amount of number work to be got from laying out the garden, measuring each row, computing the amount of seed and fertilizer used, the drawing of a plan to a scale, etc., is evident. In addition to this, there are problems in connection with the harvesting and the sale of the vegetables, and the use to which the money realized from the sale is put. All know the opportunity for valuable lessons in measuring and getting fractional parts of measures that is offered in cooking.

A garden book is kept in which a record is made of the variety of seed planted, quantity, time, amount of fertilizer, cultivation stages of growth of plants, harvesting, etc. The lessons in spelling and English in connection with this work are invaluable.

A study is made of the history of each plant and the work in geography and history receive an added interest.

The making of a record furnishes a proper motive for drawing and writing.

In all of our work the activity comes first and gives a motive for drill in arithmetic, spelling, geography, history, language, etc. Books are used, but only as our tools. Reading serves three purposes. It helps interpret to us our own experiences, gives us information, and leads us into the realm of literature.

The atmosphere of the school is that of a country home. The teacher is a mother surrounded by her children. The children are free to move about and are encouraged to think and act for themselves.

HOMES

FLOSSIE CRANNELL MEANS

O little homes, ye little homes of love!

Strength of a man; a woman's song; laugh of a child;

Warmth of a fire; glow of a lamp; though wild

The wind without, and grim the skies above.

O little homes, set close at every hand!

Ye narrow walled-in worlds of joys and fears,

Built of the commonplace of smiles and tears,

Ye are the heart and sinew of the land!

—*The Youth's Companion.*

BUSINESS TRAINING FOR WOMEN

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PRACTICAL TRAINING IN LUNCH ROOM MANAGEMENT

One of the problems facing students in household economics courses is how to secure the actual contact with business conditions which will equip them to hold managerial positions instead of devoting the first year after graduation to virtually apprentice training while they are learning to apply their theoretical knowledge.

An illustration of what may be done in the way of combining actual experience with class room work is the arrangement made by the Women's Educational and Industrial Union for students in the Institutional Management course and Household Economics School of Simmons College. The Union, as its name implies, comprises departments engaged in educational work with others of distinctly industrial character. The Lunch Rooms, Food Shop, The Handwork Shop, and Hat and Gown Shop are business organizations conducted and managed according to the best business standards. These departments in addition to contributing to the support of the social and educational activities of the Union are utilized as business training laboratories. To do this successfully they must present the conditions of the commercial world. It is just because they are conducted on a purely business basis that they are of value as practice shops. The Union offers, to properly qualified students who are interested in the business side of domestic science, opportunity for gaining practical experience in lunch room and food shop management while they are pursuing their college work.

The lunch rooms at the Union and New England Kitchen (a branch of the Union plant) conduct a business amounting to more than \$250,000 yearly, and employ a force of over one hundred paid workers. The School Lunch Department prepares and sends out daily lunches for more than 5000 high school pupils in seventeen different centers. The Food Shop carries on a business amounting to over \$100,000 yearly and has a force of thirty-two workers. Connected with the Food Shop is a catering department, a food laboratory, and a candy kitchen, each offering excellent opportunities for practical experience. The students who go into any of these departments for practice learn

the meaning of a working day, gain an understanding of the demands made upon workers, and confidence in handling large problems and in meeting unexpected situations, and grasp the importance of organization and system. The work for the students is definitely outlined. They are required to conform to business standards, and are rated on their attitude and ability to measure up to commercial demands. For the students in Institutional Management the work is divided into three periods. The students following this program, which is part of a special one year course at the College, are women of maturity who are preparing for business positions.

During the first period, which represents one day a week for six consecutive weeks during the first semester, the students become acquainted with the different departments at the Union, and study the organization from the managerial side. The second period covering eight consecutive weeks, one day a week, is spent in active participation in the work of the kitchen. Here the students learn the details of the work and the importance of system. The third practice period is offered to those students who wish to specialize in lunch room management. These students spend a month working full time in the department selected. This means in general, six days a week and a seven or eight hour day. The number of hours per day varies with the particular problem on which the student is working at a given time. They come on duty at 7 a.m., for instance, when they are with the kitchen superintendent; and at 8.30 a.m. when they are in the Food Shop. In each department they are present during the busiest part of the day and so become accustomed to meeting emergencies. One week of managerial work is arranged for each student during which time she is responsible for a certain part of the regular work. Whatever it is, she sees to it that all of the details are satisfactorily carried out, as if she were actually superintendent.

Another course in lunch room management is offered to seniors in the school of Household Economics. Opportunity for practice is afforded by the college lunch room and the Union's school lunch plant. The course is elective and counts as credit for part of the regular program. It is intended for those planning to go into lunch room business and especially for students expecting to teach in high schools. In many high schools the domestic science teacher is responsible for supervising the school lunch room. Even when she is not in charge

she is generally expected to assist with suggestions and advice. Very possibly the pupils in her cookery class will be required to prepare a part or all of the luncheon. In this case she will have to direct their work. The Union's School Lunch Department affords an excellent opportunity for gaining the experience needed in this connection. It gives a chance to study simple menus, preparation of food, packing and serving at the schools, and the very important subject of accounting. The course is given in the second semester and represents about forty hours of practice. The students work in groups, one division is at the college lunch room twenty hours while the other group is at the Union. Then the divisions exchange places. By this arrangement variety in experience is afforded.

The opportunity which the Union offers means much more than the chance for practice work. That in itself is valuable, but without direction it involves considerable waste of time and effort. Learning by the absorption process is not an economical method. To make the work yield the utmost value to the individual student, to meet the special needs of each, and to correlate the practice with the class room exercises, the Union has established a department of vocational training and practice. The director supervises all of the students that come to the Union shops for training. The practice work is definitely scheduled. The course is planned so as to give each student a series of definite problems through which she will gain an understanding of the necessary organization. A great deal of individual attention is given each student. This is particularly the case with the students in Institutional Management who are taking the intensive one month course for lunch room direction. Each student meets some member of the managerial force, director or assistant director, in the department for a conference on her work and the problems that have arisen. The director of practice meets the students several times a week for individual conference. Each student makes daily a written report in which she gives an account of what she has done and discusses the questions that have come up in the department. This is with a view to recognizing all the points of efficiency and successful organization. The papers are later discussed with the director of practice.

The practical value of this training is indicated by the type of positions taken by women completing the course. Women who with-

out this correlated college and business training would commence work as assistants are enabled to assume managerial responsibility at the start.

The business side of domestic science offers exceptional opportunities for properly qualified women. Salaries are higher as a whole than in corresponding teaching positions. And there is no dearth of openings. To women who do not care to teach and who possess executive ability it is a particularly attractive field.

PRACTICAL TRAINING IN SALESMANSHIP

Suggestive of the increasing interest among college women in business opportunities is the introduction this year of a summer course in salesmanship and department store work at Simmons College. The course which covered six weeks, from July 6 to August 14, is informational in character and intended primarily to serve as a general background for the one year normal course for teachers of salesmanship given by the Women's Educational and Industrial Union in coöperation with the College. The summer course in no way attempts to train teachers of salesmanship, its aim being to acquaint students with the subject matter of department store work. It may, however, count as credit for part of the regular course in salesmanship. This is particularly the case with women of maturity and successful teaching experience. And it is to the women of this type that the course will be of especial value in enabling them to complete the regular program before the end of the college year. This is important, because the demand for trained women in the field of salesmanship is so pressing that many of the students are called to accept positions before they have finished the year's work. A large number of the requests from stores and business firms come in mid-winter and it is largely to meet this situation that the summer course has been established.

The work comprises the study of such subjects as store organization, store system, store principles, progress of merchandise, and selling methods. A number of special lectures were given this summer by experts in store and educational work. The list included the following topics:

The history of training for department store work, Mrs. Lucinda Wyman Prince, Director of Salesmanship in High and Continuation Schools, Boston; The relation of the customer to the department

store, Mr. Walter A. Hawkins, Superintendent, Jordan, Marsh Company; Business ideals, Mr. C. Lothrop Higgins, Millinery, Boston; The human side of department store business, Thomas K. Corey, Store Manager, William Filene Sons' Company; Department store business in terms of figures, Charles C. Ferris, President, Gilchrist Company; and Coöperation of store and school to meet the educational needs of young workers, Dr. Franklin B. Dyer, Superintendent of Schools, Boston.

In addition to the class room exercises there was considerable laboratory work, consisting of observation, investigation, and actual store practice. Several of the large department stores in Boston were used as laboratories, and arrangements were made by which students taking this course were allowed to do a limited amount of selling in these stores during the summer session. Other forms of practice are service shopping, reports of sales observed, analyses of window displays, and comparisons of store service features.

The field of salesmanship is an excellent one for the college trained woman. Salesmanship teaching and educational store work represent new occupations for women, and occupations in which the demand for the competent by far exceeds the supply. It is a type of work that appeals to women who prefer a special form of teaching, to those keenly interested in social service and welfare work, and to women with sound business ability. Salaries and chance for advancement are good. And the opportunity for initiative and personal development are exceptional.

The Union's training course for teachers of salesmanship has won wide recognition, and the demand for educational directors is so urgent that it is difficult to meet the calls which come from all parts of the country.

That college women are attracted by the work is shown by the fact that fifteen colleges and universities as well as seven normal schools are represented by the fifty-five graduates of the course. Positions held by these women include teacher of salesmanship in high and continuation schools, educational director in department store, service manager in factory, and director of vocational guidance work. The salaries range from \$1000 to \$2000 a year. The course which was definitely organized by the Union in 1912, since 1913 has been conducted in coöperation with Simmons College and leads to a certificate from the College.

THE COMMUNITY ORGANIZED FOR NEIGHBORHOOD PATRIOTISM¹

A scheme for the organization of rural communities for both business and social purposes is worked out in an article which has been printed as a pamphlet for the use of the Department of Agriculture, Office of Markets and Rural Organization.

The scheme calls for ten committees, five of which are to deal with business needs, and five with social needs. Every member of the organization is to serve on some one of these committees, and in addition, there is to be a central committee which directs the general policy of the organization, raises funds and controls expenditures.

The committees that are to deal with the business interests of the community are as follows: Committee on Farm Production, Committee on Marketing, Committee on Securing Farm Supplies, Committee on Farm Finance and Accounting, Committee on Communication and Transportation.

Similarly, the five committees that attend to the community's social interests will deal with: Education, Sanitation, Recreation, Beautification, Household Economics. The work of most of these committees is indicated by their titles; for example, the committee on production can encourage the formation of corn, poultry, pig, canning and gardening clubs.

In the same way, the committee on marketing can secure the standardization of the community's products, and search out the best markets, make contracts on a large scale which will be more favorable than any individual can secure for himself, and in many other ways economize in the selling of the community's goods. The Committee on farm supplies can economize in buying.

Just as the five business committees are to grapple with the fundamental problems of producing and selling, the five social committees should direct their efforts to the improvement of living conditions in the country; to securing better facilities for educating the children; better sanitary conditions; and more household conveniences such as hot and cold water, heating and lighting systems, etc.

As an appendix, the pamphlet contains a brief list of suggested readings for the various committees. Many of these are Government publications.

¹ Office of Information, U. S. Dept. of Agriculture.

HOME ECONOMICS DAY AND ITS OBSERVANCE

Home Economic students and teachers are now thinking of the best way to observe Richards Day, December third next. The American Home Economics Association, the Richards Memorial Fund Trustees, and all others interested in the progress of Home Economics hope, first of all, that the observance will be very general. They also hope that the Memorial Fund may be increased as a result of the loan exhibitions, teas, candy sales, plays, pageants, or whatever else may form an appropriate part of the day's observance. The Fund is growing, and, though the income is not very large, it will be expended in ways which will immediately help the cause which owes so much to Mrs. Richards. Is not this immediate usefulness one more reason why we should all work for the Fund?

There is one kind of observance which is always appropriate for Home Economics Day, and that is a meeting of students and faculty only, or open to the public, with a program including a sketch of Mrs. Richards' life and activities, selections from her writings, and, in general, an appreciation of her work for the home. Or, the meeting may take a more general form, if this seems preferable. If this is the case, it may, in the opinion of those who have given the matter thought, most appropriately take on a retrospective or historical character, in order that each new generation of Home Economics students may keep in touch with that which has gone before. The JOURNAL OF HOME ECONOMICS contains, in its advertising pages, a list of the Association's publications and reprints, which will prove invaluable as sources of definite information regarding Mrs. Richards and her work. Scattered through the volumes of the JOURNAL will be found articles bearing upon the history and development of Home Economics and references to other sources of information which may be consulted in preparing an historical program.

For those who wish something of a different nature, several suggestions are made. "An 1876 Tea" would prove attractive, at which costumes of the period are worn and "refreshments" served which are in keeping—for which see "The Ladies' Column" in the fashion magazines and other periodicals of the time. This would be appropriate because the present interest in interior decoration, art needlework, and other similar matters pertaining to household art had its modern revival at the Centennial Exposition.

A series of tableaux—"Preparing the Dinner in Other Times"—is worth trying, if one prefers this form of entertainment. It would certainly be entertaining to have a glimpse of how it was done, "In A Colonial Kitchen;" or "In Camp with the Soldiers during the Revolutionary War," (with the camp fire, pots, and kettles, and camp table); or by the "Pioneers on the Trail," when "prairie schooners" were crossing the great American desert; and in "A Corner of the Rumford Kitchen at the Chicago Exposition in 1893," where Mrs. Richards demonstrated to a wide public the fact that Home Economics is an important aid to social service, since it can supply clean, wholesome, and satisfactory food at reasonable prices and under good surroundings.

If this seems too elaborate, perhaps a series of pictures—"A Dream of Fair Women—and Their Work in the Home" might be satisfactory. These living pictures could include "Mother" (mending, or reading to a child); "Grandmother" (spinning or knitting); "Mother's Helpers" (a group of children sewing or paring apples); "The Dairy Maid" (with her pails of milk or working butter); "The Cook" (with her sleeves rolled up making pudding); "The Laundry Maid" (starching a frilled cap); "The Haymaker's Helper" (with rake and sickle); "The Nurse" (with her bundle of herbs making camomile tea for an invalid in a chair who looks more interested than ill); and so on—with costumes of 1830 or some earlier date, in order that the effect may be more picturesque than would be the case with modern costumes.

A loan exhibition of "Fancy Work of Yesterday" would also be very satisfactory, for all of us would be glad to see brought together the samplers, wax flowers, picture frames made of "leather work" or of "imitation coral," embroidered collars and undersleeves, the perforated "card board" mottoes, spatter work, splint work, "air castles," hanging baskets, bead work, "charm strings" of buttons, tatting, transparent painting, and so on—not to mention hair wreathes and hair jewelry—indeed, all those things our mothers, grandmothers, and their friends passed so many pleasant hours in making, and which, after all, are as well worth while as much of the fancy work of today.

Those who wish to give plays should not forget "Prince Caloric and Princess Pieta." Copies of this attractive little play can be secured through the JOURNAL.

The feeling has been frequently expressed that a play or pageant should be written commemorating the many important things which the New World gave to the Old. We have only to think of Indian corn, potatoes, tomatoes, chocolate, and so on, to realize that the list of those which pertain to the subject-matter of Home Economics is long as well as important. Those who have made the suggestion and others may be glad to know that such a pageant has been written. It is called "America's Gifts to the Old World" and it is hoped that it will be published, and be obtainable, through the JOURNAL before November first. The pageant calls for quite a number of characters and for a presentation which may be elaborate or simple as circumstances determine. It has been prepared for the express purpose of aiding the Richards Memorial Fund, and it is expected that whenever it is given some arrangement will be made by which the Fund will profit. It is suggested that any who might wish to present the pageant for this coming Home Economics Day celebration correspond with the Editor of the JOURNAL before making definite plans, as the time is short. Though appropriate for Home Economics Day, the pageant would prove equally good for Home Economics students who wished to use it at some other time. Indeed, it would be very useful for Commencement Week, since it can be given out-of-doors. Moreover, it is believed that interest in the pageant will not be confined to Home Economics workers, for in subject-matter and treatment it should interest any group of persons wishing to stimulate patriotic interest and to encourage pride in this New World which to us is Home.

EDITORIALS

THE BEST DEFINITION OF HOME

In response to a suggestion of Miss Helen Louise Johnson, the National Chairman of the Home Economics Department of the General Federation of Women's Clubs, the *Pictorial Review* last February offered \$500 in prizes for the seven best definitions of the word "Home" sent in by any federated club.

Thousands of manuscripts were submitted, hundreds of them good, half a hundred worthy of a prize.

Miss Zona Gale, in her explanation for the Committee of Award of the basis on which the decision was made, expressed her own lofty ideal of the meaning of the word.

She says:

In trying to judge the manuscripts submitted, I am struck by certain facts in the conception of home:

I. That it is a triumph that ideals of individual and family living have come to be as high as those expressed in virtually all the essays, but that ideals of the socialized home are farther to seek. For most of these conceptions are of the best-developed homes of the past and present, and there seems to me to be not enough shadowing of what home should be—tomorrow.

In the essays are presented, first, the earliest ideas of home as a place for protection and defense; second, the later idea of home, historically, as a place for shelter and feeding; and third, the more recent ideal of home as a place for spiritual strengthening, love and child-training.

Also, many of the essays seem to be from the age-long viewpoint of the man, namely: home is a place for rest.

II. That nearly all the essayists seem to have predicated four walls, a roof and a floor as necessities to home.

If I go down-town and some one asks me where my home is, my reply is a street and a number. If I am in another town, my reply is: "Portage is my home." If I am in another state, my reply is "Wisconsin is my home." If I am in Europe, my reply is: "America is my home."

All these, then, are home. But only the first of these is, in most cases, treated in these definitions.

I am giving my judgment to those essays in which the connotation of home is widest and which seem to me to approximate most nearly to an ideal for the life of the race.

This is because it seems to me that just in proportion as we recognize by name all our homes, and our relationships to them, and thus define home, so—as a result quite as much as a cause—will the smallest home of them all, the walled home, grow toward its ideal and towards its next step in development.

And when once we can feel for a continent—and all its spiritual content—the glow and the thrill which we feel now for our own street address—and all its spiritual content—what a home the home planet will be.

The first prize, of \$250, was awarded to the Bathgate Study Club of Bathgate, North Dakota. This manuscript was submitted for the club by Miss Janet Davies.

Home is the index of civilization. Some words there are in our English speech so big with meaning, so rich in suggestion, so golden with poetry that they will not be defined. Home to each of us is too full of meaning to be limited by any statement of mere attributes. It rings with magic echoes and to our inner sense means rest, content, sympathy, love and service. Through all our years the content of the word has grown richer, through all the ages the thing itself has grown more sacred.

Long ago in the history of the race, before the institution of the family, there must have existed some temporary shelter, some familiar spot, that was rest to the primitive woman, some protective nest woven by mother ingenuity for the primitive child. For home has always in its truest and best sense meant a place for the nurture and the care of the young, and the idea of home always centers about the relation of parent and child.

As civilization grew, the home, its concomitant, its instrument, its ally, and its truest index grew, too. With the growth of a complex and cultured life came the need for a longer period of preparation, a protracted infancy, a period of plasticity. The child must be protected and directed so that he might be formed to the truest and highest and most diverse manhood.

So homes grew up, founded on the institutions of marriage and the family and with their prime function, the rearing and education of the child. But this is not their only service. The adult needs a home to be his lode-star in the perplexities, his haven in the buffetings of modern life. Then, too, in our lopsided and imperfect lives, it too often comes about that there are empty homes where no children have come, desolate homes where the children are gone, makeshift homes founded on curious or accidental relationships—and these, too, may be real homes.

For a true home is something other than a mere dwelling-place, some-

thing further even than the habitat of a family group. Home is a beautiful atmosphere of cheer and rest and content and mutual service. To it the individual brings the best that is in him, and from it in return he receives the most unselfish joy. Here he may expand and relax, here he is most wholly himself, here he comes again to be in tune with himself and in tune with God.

For home reacts on its creators. Into its making, a man or woman, commonplace enough to outward seeming, may put an energy almost superhuman, a devotion almost sublime; this toil and sacrifice sweeten home and hallow it, and bring forth the good fruits of sound living. The children of a real home, hut or castle though it be, go out dowered as richly and wisely as the brooding parent love can dower them. They have inherited, as far as a new life may, the very lives, the strength, the vitality, the dear-bought progress of the parent two. The best energy of a generation has gone into them. They are to be the supermen of the future. They are to carry the family one step onward toward the fruition of its ideals. They are to lift progress and culture one step upward for all of human kind. It is not for nothing that the immigrant woman toils in the sweat-shop that her children may have American clothes, or that the ditch-digger foregoes meat that his son may go to college. Unconsciously through parental love, the welfare and advancement of the race work out.

But it is not alone the poverty-bound who give their very lives to their homes and their families. When material needs are satisfied, the growing spirit needs oversight and sympathy and direction, too. We want to give to our children not only sturdy bodies and well-equipped brains, but right habits of regular living, prompt doing, clean-cut speech, clear thought, intelligent curiosity, and right instincts, that they may be earnest in word and work, quick to the beauty in and of life, reverent toward God and his temple in their human bodies. So does home minister to the soul and the body, to the individual and the family.

The home has ever been the cradle and the chief instrument of progress. Every advance in the standard of material living and in the thought and culture of the race is germinated and reflected there. The progress or decay of a people can be measured by its home life. It is significant of the new brotherhood, the new sensitiveness to civic responsibility, that we can no longer be true to the family in the best sense without taking thought for our neighbor's safety—that we cannot live for ourselves alone.

We have widened our sympathy and our interests and we are heeding the needs of our community. Civilization has come at last to the era of fraternity, of coöperation, of communal sympathies. Home, always the index of civilization, is filled with a new bigness, a new pulsing neighborhood life. Home is growing out to that larger life that will some day make brothers of all the world.

HOUSEKEEPERS' DEPARTMENT

ELECTRIC VACUUM CLEANERS

M. E. COOLEY

Student at Teachers' College

In vacuum cleaning machines, a partial vacuum is produced in the machine and in the pipe line and tool. The face of the tool is held squarely on the surface to be cleaned. The pressure of the air outside the machine is greater than that inside, and a suction is produced depending upon the amount of difference in pressure. Air is thus forced into the machine carrying with it dirt and dust from the object cleaned. This dust-laden air is then passed through a bag where it is freed from its dirt, and passes on through the air pump and out into the room again, or into outdoor air.

The important parts of a machine are: vacuum producer, motor, dust-bag, and renovators or tools.

The vacuum producers are of two principal types—piston type and fan type.

The piston type is good for cleaning small rugs—will take up larger material (matches, paper) than the fan type. The Root type (rotary piston) is the most efficient where carpet cleaning is the principal function, and a hose $1\frac{1}{4}$ inches in diameter is used, but with smaller hose (1 inch in diameter) the piston pump is better.

Where carpet cleaning is of secondary importance the fan type is efficient, and the initial cost is less. Of the fan type the "single stage centrifugal fan," is little better than a good carpet sweeper. The "multi-stage centrifugal fan" is efficient for bare floors, but not so good for carpets and upholstery. A "multi-stage centrifugal fan" consists of several electric fans rotating horizontally on a vertical shaft. They are similar in action to the rotary lawn sprinklers—air enters at center of the fans, and is forced out at outer edge of fans and thence to the outlet pipe.

The motor causes the piston to pump out the air—or the fans to rotate. Vertically mounted motors give longer service, and have less

friction than those horizontally mounted. The brushes should be easily removable.

The dust-bag should be on the suction side of the vacuum producer; that insures the passage of the dust-laden air through the bag before it enters the pump chamber.

The tools, furnished with lower priced cleaners, generally include a full set for floors and floor-coverings; extra lots may be bought at prices varying with type of tool desired, prices ranging from \$0.30 to \$4.

The form of a tool for any particular service is important. A carpet renovator should have a slot not more than 12 inches long and $\frac{3}{8}$ inch wide, and the face in contact with carpet not more than $\frac{3}{8}$ inch on each side of the slot, and slightly rounded at the outer edge. This form is less likely to tear the pile off the carpet. To avoid tearing upholstery and clothing, the slot should be divided into a number of small slots inclined to the edges of the face. For bare floors the face of the renovator should be curved, not flat, and should be of felt. The tool for ceilings, and other flat surfaces is a bristle brush; but this is not sufficient with the portable type of machines. Tools for cleaning corners are efficient only with the installed systems. To clean carving and relief work, round-bristle brushes with extra long bristles and cotton skirting have been found to be the most efficient. To clean radiators and library shelves, the best form is a piece of tubing flattened at its outer end.

Installed plants are much more efficient than the portable machines. They range in price from \$300 down and it costs from one to two cents per hour to run them, depending on the cost of the current in any locality. There are semi-installed machines ("portable stationary" cleaners) that are as efficient as the installed systems. These are especially good for people who live in a rented house, as they can be readily removed. They require an inconveniently long pipe, and for that reason are not so easily handled. They range in price from \$32.50 up. The portable machines vary greatly in price from \$18 to \$125. In general the cheap forms seem efficient for a time but are not durable. Cost of running the portable cleaners is the same per hour as for the stationary plants in the same locality.

The housekeeper should consider these points when buying a machine:

Motor.—Vertically mounted, see that the "brushes" are in good condition and easily removable.

Lubricator.—Should be able to operate a hundred hours without its requiring relubrication.

Dust-bag.—On suction side of the vacuum producer, should not get clogged easily. To test this—it should be able to pick up at least $\frac{1}{2}$ peck of mixture 40 per cent sand, 15 per cent sweepings, 15 per cent Portland cement (or very dry flour) and to retain this in the bag and still be able to pick up material from a bare floor.¹

Handles of tools.—Should be rigid and with some sort of swivel joint between the renovator and its stem.

Weight.—If a portable type, it should not weigh more than 75 pounds. This is heavy for a woman to carry.

PERSIMMON RECIPES²

MANY WAYS IN WHICH THIS NATIVE FRUIT MAY BE USED

A new publication of the United States Department of Agriculture, Farmers' Bulletin No. 685, calls attention to what it believes is an unwarranted neglect of a food fruit—the native persimmon. In addition to good flavor (when well ripened), the persimmon makes a good showing, pound for pound, with respect to the nutritive material which it supplies.

As the bulletin points out, many persons with fine persimmon trees in their possession are allowing the fruit to go to waste either through ignorance of the many uses to which it may be put or through prejudice. There is a saying in the persimmon country that persimmons are “good for dogs, hogs, and ’possums.” This, however, is declared to be a gross injustice to a very valuable product.

One reason for the neglect of this fruit is the mistaken idea that persimmons are unfit to eat until they have been touched by frost. As a matter of fact much of the best fruit is lost each year because it ripens and falls to the ground where, not being touched by frost, it is left to rot. Such persimmons as are not edible before frost comes are a late variety of the fruit and the reason that they pucker the mouth is because they have not yet ripened. In general the best fruit are those than ripen just before the leaves fall.

At the present time the most common use for the fruit in the per-

¹ The bags furnished with most reliable machines are now so standardized as to obviate the necessity for testing.

² Office of Information, U. S. Dept. of Agriculture.

simmon belt, which extends from Maryland, Virginia, and the Carolinas westward through Missouri and Arkansas, is as food for hogs. It can, however, be made up into a large number of very palatable products for human consumption. To be on the safe side it is well to add a half teaspoonful of baking soda to each cupful of persimmon pulp whenever the fruit is subjected to heat. This does away with all risk of astringency, the quality in unripe persimmons which produces the well-known puckering of the mouth. If the fruit is perfectly ripe this precaution is not necessary, but as there is always the possibility of some green fruit finding its way into the pulp it is usually advisable.

According to the writer of the bulletin, the following recipes will be found simple and agreeable:

PERSIMMON BREAD

1 cup of persimmon pulp,	Yeast,
1 cup of water,	Shortening,
$\frac{1}{2}$ teaspoonful of soda,	Flour to make a stiff dough.

Set to rise, mold, and bake like other bread.

PERSIMMON CRUMPETS

Take 1 pint of the sponge of persimmon bread which has been set over night, add 1 egg and enough milk to make a thin batter, set to rise for one hour, then bake on a hot griddle like griddle-cakes. Serve hot with butter or sirup.

PERSIMMON GRIDDLECAKES

1 cup of persimmon pulp,	1 teaspoonful of baking powder,
1 egg,	$\frac{1}{2}$ teaspoonful of soda,
1 cup of flour,	Milk to make a thin batter.

Bake and serve as above.

PERSIMMON CAKE

1 cup of persimmon pulp,	1 teaspoonful of baking powder,
$\frac{1}{2}$ cup of sugar,	$\frac{1}{2}$ teaspoonful of soda,
1 egg,	Butter of size of a walnut.
1 cup of flour,	

Bake 40 minutes in a moderate oven. For a soft pudding leave out the eggs. For a custard leave out the flour and the baking powder.

PRESERVED WHOLE PERSIMMONS

Put a thin layer of sugar in the bottom of a jar; then a layer of whole ripe persimmons, then a layer of sugar; and so on until the jar is full.

The sugar will soon dissolve and form a sirup. Press the upper fruits down under the sirup or add more sirup to the jars. Seal and store until used. The sirup may be drained off and the fruits served like dates, which they will resemble very much in both appearance and flavor.

PERSIMMON ICE CREAM

2 cups of persimmon pulp,

1 cup of thick, sweet cream.

Beat together thoroughly and freeze like ordinary ice cream. The fruit must be thoroughly ripe and nonastringent.

PERSIMMON FUDGE

2 cups of persimmon pulp,

2 cups of sugar.

Cook over a slow fire, stirring occasionally, until graining begins. Add 1 teaspoonful of baking soda and stir over the fire until quite stiff. Spread on buttered platter or paraffin paper.

THE MISCHIEVOUS WIPING CLOTH

The dish towel, even the genteel barred variety, called a tea towel, is in bad repute. Ever since men began to look through the microscope and think in terms of the microscope its fate has been sealed. Only when freshly washed and boiled and used in clean hands to wipe the rims of already scalded and drained dishes is it to be admitted into a modern kitchen. Used in dirty hands till grimy, carried on the arm of a waiter and used to polish a plate or wipe up a table, it belongs to the dark ages, hygienically speaking. In dish washing the household should more and more approach the practice of the laboratory where glass ware and porcelain are washed, rinsed in boiling water and placed to drain. No cloth, no matter how well known its antecedents, is allowed to touch them, for they are now absolutely clean and must remain clean.

In cleaning toilette articles, bath tub and basin it should be remembered that ordinary cleaning cloths belong, like the scrubbing brush, to the early coarser processes. The final cleaning must be by hot water only. Whatever comes in contact with any body aperture must be free from all possibility of bacterial contagion. The common bath tub has doubtless been a carrier of disease germs from one person to another. Before use, however clean it may look, it should be scalded out and not dried with any of the cloths ordinarily given over to the purpose.

PURCHASING MEAT

Every housewife should know how to select meat wisely and understand how to utilize the various cuts of meat to the best advantage. In recent numbers of the *Journal of Agriculture and Horticulture*¹ some information is given regarding the selection of meat, which should prove of value to many housekeepers though part of it is of especial interest to the institutional housekeeper, since she more often can control conditions and select from a wider choice.

The author recommends that the purchaser "buy from the side or quarter always and learn to judge meat in this way, considering the following points:

1. "Patronize a neat, sanitary shop.

2. "Consider the shape of the side.

"Too large a carcass shows age and coarseness.

"Heavy brisket shows coarseness and toughness.

"Heavy front quarter shows poor breed and hence poor quality.

"Carcass should be symmetrical.

3. "Finish of carcass.

"Outside should be well covered with fat. Hard fat in lumps indicates staleness.

"Ribs should be well covered with fat—not too much kidney fat.

4. "Depth through the back. Choose from a side showing thickness through the back. This indicates a generous amount of meat.

5. "Color of meat. See that the lean is well streaked with veins of fat and that flesh is a bright red, not dark red.

"Avoid a side which is sparsely covered with deep, yellow fat, with dark red flesh. This indicates cow beef."

Diagrams of a side of beef or other meat showing the name and location of the different cuts are generally to be found in the best cookbooks. A study of such diagrams which are probably familiar to most housekeepers should prove helpful to the purchaser of meats. Other useful information which is not generally available in connection with such diagrams is collected in a convenient form in the following table which is reproduced from the above mentioned article.

¹ *Journal of Agriculture and Horticulture*, Dept. Agr. Quebec, 18 (1915), nos. 10, pp. 221, 222; 11, pp. 243, 244.

A table of information about cuts of beef

NAME AND LOCATION OF CUT	HOW SOLD	CHARACTER AND QUALITY OF MEAT	PREPARED FOR EATING
Loin. All between first rib and rear end of hip-bone.	In slices: a. one to two inches thick—Delmonico porter-house, and sirloin steaks; b. thicker slices for roasting.	Lean, mostly tender fat on edges; little bone. Sirloin steaks: 1. Hip-bone sirloin next to the porter-house, with large tenderloin, is the best. 2. Flat-bone sirloin second choice. 3. Round-bone sirloin, poorest.	Best quality for roasting and broiling.
Rump. Back of loin.	Sold either whole or in halves. In latter case, aitch-bone is split in two.	Tough with considerable bone.	Corned and boiled. Excellent pot-roast.
Round. 1. Top, inside of thigh. 2. Bottom, outside of thigh.	Sliced, or cut thick. Best part of bottom round sometimes cut with top for dealer's advantage. Cut thick.	Solid piece of juicy, fairly tender lean bordered with fat. Good meat has thick piece of fat between top and bottom round. Similar to top round, but tougher, has streaks of bristle.	Excellent for braising, pot-roast, and beef loaf, also for beef juice and beef tea; fairly good roasted or broiled. Pot - roast, soup, mince-meat.
Top Sirloin. Between sirloin and round.	In steaks or for roasts.	Solid piece similar to top round.	Fairly good steak; excellent pot-roasted.
Prime ribs. First six ribs.	Sold in pieces containing upper parts of two or more ribs may be boned and rolled; with ribs left in is called "standing roast."	Similar in quality to loin, but has more bone and no tenderloin.	Fine roasts.
Blade — 7th, 8th and 9th ribs.	Cut like prime ribs; blade removed.	Similar to prime ribs, but has more gristle and bone.	Braising, beef loaf, stews, Hamburg steak.
Chuck—10th, 11th, 12th and 13th ribs.	In steaks, or boned and rolled.	Spinal processes long, tough.	Braising, pot-roasting, or stew.
Neck.	To suit purchaser.	Juicy and well flavored but tough.	Excellent for stews and soup.
Brisket.	To suit purchaser.	Layer of juicy well flavored meat over fat and bone.	Boiled or corned.

A table of information about cuts of beef—Continued

NAME AND LOCATION OF CUT	HOW SOLD	CHARACTER AND QUALITY OF MEAT	PREPARED FOR EATING
Cross-Rib. Lies across the ribs.	To suit purchaser.	Muscles all run one way; no waste.	Pot-roast or inferior steak.
Plate. On the side below ribs.	To suit purchaser.	Has layers of fat and lean, with thin bones (ends of ribs) at bottom.	Corned and boiled.
Navel. Middle part of belly.	To suit purchaser.	Similar to plate, but has less bone.	Usually corned and boiled.
Flank, below the loin. 1. Thick flank. 2. Flank steak.	1. To suit purchaser. 2. Whole.	Coarse and tough; no bone, fine flavor. (Should not be corned, because it has no fat or bone to protect its juices.)	1. Stewed or boiled 2. Rolled and braised.
Fore Leg or Shin.	Whole or to suit purchaser.	Tough, with bone and tendon.	Soup.

It must be remembered that the cuts of meat vary somewhat in different sections of the country. This table gives the Canadian cuts that differ slightly from those in use in New York, Boston or Chicago. In Boston, e.g., a cut called the "back of the rump" is an excellent roasting piece for a large family, and is preferred by many to any other roast. In many places a flank steak is furnished that, well scored, may be successfully broiled and is juicy, fine flavored and inexpensive.

These differences in cuts are never so great as to lessen the value of this chart.

The study of a side of beef shows that a greater portion of it must be classed as "tough cuts," since the ribs and the loin are the only "tender part."

The tough cuts are cheaper than the tender cuts but this does not mean that the tender cuts are the most nutritious. The two nutrients in meat are protein and fat, and investigation has shown that the protein obtained from a given weight of meat differs very little either with kind of meat or the "cut." The difference between the cuts is chiefly in the amount of fat.

THE BIRD POPULATION¹

The present bird population is much less than it ought to be, according to the biologists. If birds were given more protection and encouragement there would be an increase in numbers which would be accompanied by a corresponding decrease in the number of insect pests.

While one usually thinks of the English species when the word "sparrow" is mentioned, there are some 40 species of sparrows in North America which are helpful rather than harmful and should be encouraged rather than discouraged.

The complaints against the robin have dwelt on his fondness for cherries, strawberries, blackberries, raspberries, pears, peaches, prunes, grapes and even olives in California. The bluebird's consumption of cultivated fruits seems more limited, being practically confined to cherries, raspberries, and blackberries, and its fruit-eating period is very short, being only from late fall to early spring when the insects which it prefers are scarce.

A news bulletin contains a list of ornamental plants bearing berries which, it is suggested, might be planted in regions where the robin and bluebird are occasionally compelled to feed on cultivated varieties of fruit and berries. In olive regions, for instance, if a robin can find such berries as *Madrona*, *Heteromeles*, and *Cascara* he will prefer them to the cultivated fruit valued by man. Mistletoe and elderberries are among the varieties recommended for the bluebird in particular. Dogwood, pepper berries, china berries, and hackberries are popular with the robin, and, in the North, cedar, smilax, and holly give them both food and shelter. The best time of year for transplanting woody plants is late fall or winter.

The Department's biologist advises farmers by all means to encourage the robin and the bluebird, considering that they will more than compensate for occasional depredations by the assistance rendered in killing undesirable insects and that they can be pretty effectually kept from eating valuable fruits if they are provided with a supply of wild ones for winter diet when insect food is scarce.

¹ Office of Information, U. S. Dept. of Agriculture.

HEAT, HUMIDITY AND WORKING POWER

What constitutes a vitiated atmosphere, and wherein are the depressing effects of "bad" air to be found? Of late, temperature and humidity rather than abnormal quantities of the respired gases, carbon dioxid and oxygen, or the presence of harmful expired organic products of respiration, have been held responsible for the untoward consequences of living under conditions of poor ventilation. Drs. Lee and Scott, of the College of Physicians and Surgeons at Columbia University, have recently reported definite objective signs of physical inefficiency in individuals subjected to an atmosphere of high humidity and high temperature. Measurements were made on the working capacity, that is, the total amount of work which excised muscles of animals are capable of doing before exhaustion sets in. The subjects were kept, to cite a specific illustration, at 21° C. (69.8° F.), with an approximate humidity of 54 per cent, in one case, and at 33° C. (91.4 F.), with a humidity of 89 per cent, in the other. The contrasts here quoted represent the distinctions between comfortable atmospheric conditions and the air of a hot, humid summer day. As an outcome there was a marked diminution in both the amount of work performed and the period of working power under the influence of high temperature and humidity. Under these conditions, furthermore, the body temperature also rose somewhat. The facts thus cited in the opinion of *The Journal of the American Medical Association* confirm by the unbiased testimony of direct experiment what the sensations and psychic responses of man have long since intimated.

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Science and the Supply of Fine Cotton. W. L. Balls, *Sci. Prog. [London]*, 9 (1914), no. 34, pp. 290-309.

BOOKS AND LITERATURE

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Textiles. By WILLIAM H. DOOLEY. Boston: D. C. Heath and Company, 1914, pp. 329. \$1.25. By mail of the Journal, \$1.36.

The teacher of Home Economics always welcomes a good book on textiles, hence the revised edition of *Textiles* with its appendix of nearly one hundred pages is greatly appreciated.

The book itself does not differ greatly in subject matter and organization from the first edition. Beginning with a study of the wool fiber the author carefully considers every detail of the different processes, from the time the wool is removed from the back of the sheep until it is woven into cloth. This is followed by a woollen and worsted fabrics glossary.

Each of the other fibers is taken up in a similar though somewhat briefer manner, each being followed by a glossary.

The appendix gives interesting information on the history of textiles and the development of the textile industry.

The tests given are in the main elementary and quite suitable for the young student. The method of carrying out each experiment is carefully described and no elaborate apparatus or expensive materials are necessary.

Mr. Dooley with his experience in trade and industrial schools is particularly qualified to write a book of this kind, and teachers in such schools will find the book especially valuable. It also furnishes ideas for the development of courses in industrial history, biology, chemistry, mathematics, etc., in high schools.

Laundry Work in Theory and Practice. By E. L. MARSH. New York: Longmans, Green and Company, 1914, pp. 205. \$0.75. By mail of the Journal, \$0.83.

Miss E. L. Marsh, staff teacher of the National Training School of Cookery, London, has presented a practical, well planned manual in her new book called *Laundry Work*. The division of subject matter is made clear by carefully dividing the book into chapters, twenty-seven in number. It is very fully illustrated with drawings representing different folds of table linen and body linen, and has many illustrations on the much needed information of laundry equipment. Much of the equipment is quite after the English pattern, which is different from our American type, but is especially

helpful to students training for work in other localities. The book is most explicit, very detailed, and the facts are so plainly given that it should be of great service as a reference book to all teachers of laundry work.

Insects Injurious to the Household and Annoying to Man. By GLENN W. HERRICK. New York: The Macmillan Company, 1914, pp. 461. \$1.75. By mail of the Journal, \$1.90.

Housewives and teachers of Home Economics are greatly indebted to Professor Herrick of Cornell University for this authoritative volume, with one hundred and fifty original illustrations. These show the distinctive characteristics that will ensure recognition.

Through these pages the reader is introduced to practically every insect which injures the human body, clothes and other textiles, or food materials in all sections of the country. We make their acquaintance in their usual breeding places through their preferred food, during their rapid reproduction, and through the distinguishing characteristics of the least, as well as of the most harmful forms.

With these facts in mind, special emphasis is put upon methods of prevention. Yet, as insects are both wise and wary, the author gives in detail the best methods of extermination.

The bibliography is extensive, including references published as early as 1773.

While there is occasional repetition it is not frequent nor tiresome and the only omission that occurs to the reviewer is the need for watching unused fireplaces and chimney flues, which often let in that mysterious "swarm of flies." Screened chimney-tops may well be added to the other screened openings.

A chapter on human parasites and another about insects which annoy chiefly in the fields and woods add to the practical use of the volume.

The final chapter gives all necessary details for "safety first" and success afterward, in the use of the three gases, hydrocyanic acid, carbon bisulphide and sulphur dioxide.

With this book in the libraries and the homes the "What Shall I Do?" letters in regard to insects will be few, health and comfort greatly increased and waste of property much diminished.

1001 Tests of Foods, and Toilet Accessories. By H. W. WILEY. New York: Hearst International Library Company, 1914, pp. xxviii+249, pl. 1. \$1.25.

This volume, arranged by Anne L. Pierce, contains an introduction, "The pure food battle, looking backward and forward," a "Key to method of rating products," and a classified list of the results of the examination

of foodstuffs, beverages, and cosmetics, with comments on quality. Much information is included regarding the presumable composition of such materials. A full index is provided.

Analysis and Cost of Ready to Serve Foods. By F. C. GEPHART AND GRAHAM LUSK. Chicago: Press of American Medical Association, 1915, pp. 83. \$0.50. By mail of the Journal, \$0.56.

This book presents the results of a study of the composition, energy value, and cost of the different portions or "orders" of food served in the Childs restaurants in a number of the large cities of this country. Approximately 350 different "orders," as they were served to patrons, were purchased and analyzed in the laboratory, these representing practically all the "orders" offered by the restaurants. The data accumulated in this investigation are discussed at length and presented to the reader in tabular form. The following information is given regarding each "order:" Its cost; the weight of its food constituents; the total number of calories of energy furnished, and the actual amounts and proportion of this energy supplied by the protein, carbohydrates, and fat constituents of the food; and the number of calories obtained for 5 cents. One table shows the cost of the portion as served; the estimated cost of the ingredients constituting the portion; the total number of nutritional calories furnished by the portion with the number obtainable for 5 cents; and the cost of 2500 calories when furnished by the portion. In another table the different "orders" are grouped according to the energy which they furnish.

In an introduction to the publication Prof. Graham Lusk discusses the importance of this work in relation to some principles of nutrition, especially the value of the flavor of food, the importance of its composition, and the quantity of food required, which he considers somewhat at length.

Spices: Their Nature and Growth. By McCORMICK AND COMPANY. Baltimore, Md., 1915, pp. 32, paper. \$0.25.

Information is given concerning the growth, preparation and use of spices, vanilla and tea. Colored illustrations show the plants and berries.

A copy of the booklet will be sent free to any bona fide teacher of domestic science upon presentation of credentials.

A Second Course in Homemaking. By MABEL HYDE KITTREDGE. New York: The Century Company, 1915, pp. 249. \$0.80. By mail of the Journal, \$0.88.

In this second book Miss Kittredge prefaces the lessons with a brief review of the subject matter in her *Practical Homemaking*. The lessons then begin with one on preserving, so that the canning and preserving may

be done when school first opens, before the fruit season is over. The lessons following are on City Refuse, Laundry Work, Baking, Division of Income, Marketing, Care of Children, Food for Infants and Children, Hot Weather Problems, and the book concludes with good tables of weights and measures and about two hundred pages of inexpensive recipes.

The material presented is practical, and yet it should be presented very carefully by the teacher or much of its value will be lost.

As in the previous book the emphasis put on sanitation is most valuable and gives the teacher a good opportunity to make a connection between home problems and civic problems. The chapter on diet is excellent, although for many housekeepers in the average workingman's home the sentences might be simplified with great advantage. This is also true of the chapter on Division of Income although this chapter presents some practical lessons on the advantage of systematic accounts. The chapter on Marketing gives very practical directions. Discretion in presenting the chapter on Care of Children would obtain the best results. One of the best chapters in the book is the one on Food for Infants. The lesson on Food for Children should have practical bearing on the health of children. The Hot Weather chapter is another example of concentrated wisdom. The pages devoted to Inexpensive Recipes are particularly helpful. There are several pages of recipes for Italian families and several of kosher recipes. In general the book shows a thorough and practical knowledge of the homemaker's needs, and the subject is treated in the firm and decisive manner that is the result of such knowledge.

Your Household Budget in Graphic Form. By EMMA A. WINSLOW. Department of Household Administration, Teachers College, New York City, 1914, paper. \$0.15.

This is a folder (8" x 15" when open) furnishing a series of graphic charts for receipts and for expenditures for food, operating expenses, shelter, clothing, and the higher life. Each chart is ruled vertically and horizontally so that entries can be made for each month of a year corresponding to the amount received and the amounts spent for various purposes.

The "budget line" is drawn across each chart at the beginning of the year to indicate the standard monthly sum estimated; the actual sums received and expended month by month are then entered according to the scale, resulting in a line across the chart which expresses the actual expenditure which can thus be compared with the budget allowance. The charts will appeal to teachers of household budgets and accounts as a valuable teaching method, and should be found useful by housewives who are using or wishing to use a budget system.

NEWS FROM THE FIELD

Central Association of Science and Mathematics Teachers. The fifteenth annual meeting of the Central Association of Science and Mathematics Teachers will be held in Chicago in the new building of the Harrison Technical High School on November 26 and 27, 1915. On the programs of the section meetings in Agriculture, Biology, Chemistry, Earth Science, Home Economics, Mathematics, and Physics are prominent educators who will discuss some of the present-day problems of the secondary schools. In the general sessions addresses will be given by Alexander H. Revell, Chicago, merchant, and director and trustee of numerous educational institutions; William B. Ittner, St. Louis, architect of the Board of Education of St. Louis; Cyril G. Hopkins, professor of agronomy, University of Illinois; Earle R. Hedrick, professor of mathematics, University of Missouri; and Edward H. Steiner, sociologist, Grinnell College, Iowa. All teachers are cordially invited to attend this meeting.

Visiting Housekeeping. Under the auspices of the New England Home Economics Association a committee to extend the teaching of housekeeping in the homes has begun a study of Instructive Visiting Housekeeping. In order to learn where and how this work is being done, they have prepared for distribution a questionnaire consisting of a number of questions under each of the following headings: History, Types of Work, Types of Families, Methods of Work, Finances, After-Care, Extension, Request.

Further information and copies of the questionnaire may be obtained from Miss Annie L. Weeks, Associated Charities, 763 Massachusetts Ave., Cambridge, Mass.

Visiting Nursing. The Boston Instructive District Nursing Association, with Simmons College and the School for Social Workers, offers a course of eight months for graduate nurses wishing to prepare for public health nursing in its various branches, including infant welfare work and municipal and rural nursing. During the past few years there has been a very noticeable increase in the demand for nurses equipped for all forms of visiting nursing—in factory and other industrial welfare work, school nursing—and for hospital social service. In addition the widespread interest in preventive measures for tuberculosis, infant welfare and mental hygiene is adding constantly to the demand for nurses in educational and

preventive work under state and local boards of health, or private agencies in cities, towns and rural communities. Applicants must be graduated from a nursing school, giving at least two consecutive years in a general hospital and also giving maternity training; and must be registered nurses. They must also have had at least a high school training or its equivalent. The course began September 22, 1915, and will end June 9, 1916, with holidays at Christmas and in the spring. Three-fourths of the students' time is given to work at Simmons College and the School for Social Workers and one-fourth to practise work with the Instructive District Nursing Association.—*School and Society*.

State Supervisor of Household Arts in Indiana. Under the operation of the new Vocational Education law in Indiana, a state supervisor of Household Arts has been added to the staff of the Vocational Division of the State Department of Public Instruction, with offices at Indianapolis. Miss Adelaide Steele Baylor, who has been the general assistant in the State Department of Public Instruction, and Clerk of the State Board of Education, has been appointed to this position.

Miss Baylor is visiting schools in various parts of the country before she takes up the duties of her office in October.

Other states having some form of state supervision of household arts instruction are: Illinois, Louisiana, Massachusetts, New York and Wisconsin.

Provincial Director of Home Economics. In January, 1915 the Department of Education of Saskatchewan, Canada, appointed Miss F. A. Twiss, Director of Household Science for that province. Miss Twiss has her office in the Normal School, Regina, and is at present giving much attention to the work in rural schools.

The appointment of similar directors, or provincial inspectors, in other provinces will doubtless follow just as in several of the states, notably Wisconsin, Indiana, Maine, New York, Louisiana, and Illinois, there is a state inspector or supervisor of Home Economics.

Utah Home Economics Association. At a meeting called last spring the matter of a standard state course for high schools was taken up. The committee which had been working at this presented a course which was adopted, and which will be used the coming year in the schools. A discussion was held upon the requirements of teachers of Home Economics, but it was decided to defer action until the next regular meeting. The committee upon revision of the constitution tendered to the Association a revised constitution, which was adopted. Various other matters of

interest were taken up. Committees were appointed to standardize the score cards to be used in judging Home Economics products and also a committee was appointed to select the best text books for domestic science and domestic art.

This Association includes in its membership many of the women of the state who are not teachers, and who have given some very valuable advice in the line of Home Economics.

Santa Barbara Home Economics Association. During the summer session the branch held weekly meetings every Thursday afternoon at which interesting reports were made of the work given in Home Economics in the various schools throughout the country which were represented by the summer school faculty and students. It is planned to include similar meetings throughout the year.

Field Work at Teacher's College. An interesting feature of household arts' at Teachers College is the field work conducted by graduate and undergraduate students; in connection with regular class work many of the younger students have also taught throughout the year in the settlements of Upper New York, this work being organized by the Y. W. C. A. in coöperation with the department of household arts education. This work has not been for credit, but it is of great value to the pupils in that it gives them a live problem and a social outlook as a preliminary to the more formal practice teaching in the school. Graduate students have been working out assigned problems in the housekeeping centers connected with the public school, and others have superintended the teaching of classes of backward girls in one of the public schools after school hours. Prevocational and vocational education are being instituted in New York City and this gives qualified students an opportunity to study this type of education during its inception. Under Miss Cooley's supervision students have been working regularly in Public School 62 with prevocational classes. One graduate student has conducted a most interesting piece of work in connection with other work at the School of Philanthropy in investigating the dietaries of a group of women who are tenement dwellers, and most of whom have recently come to this country. The list of all such activities would be too long for publication; but these brief notes show how opportunities in a city like New York may be used in connection with educational work.

It may seem strange to the casual observer that a city college should undertake rural work. While it may not seem the best possible division of labor, this line of work has been forced upon Teachers College by the demands of its students. Not only in the summer but during the winter many courses are given which are taken by county superintendents and

other supervisors, as well as by teachers. There is a group of courses in Rural Education with Prof. Richard E. Dodge as adviser, and a diploma in this field will be granted. The department of household arts education offered a summer course in household arts in rural schools, conducted by Miss Spohr, who is familiar with rural conditions. Opportunities for field work are not so far distant from Teachers College as might at first seem, as a short journey will lead one to a district where the rural school is found and where lectures may be given to a woman's club.

Dr. Warren R. Wilson gives a course of lectures in Rural Sociology and conducts a seminar. Dr. Winslow has taken groups of his students on an automobile trip to rural schools in Dutchess County.

A College for Teachers at the Johns Hopkins University. Another step towards the realization of a teachers' college in Baltimore was taken in the recent creation of the degree of Bachelor of Science in Education, by the Johns Hopkins University. This marks a partial fulfillment of the hopes which the University has entertained for years. As early as 1910, the University announced its desire of establishing a department for the higher training of teachers as an organic part of the University.

The curriculum leading to the new degree will be based on the College Courses for Teachers and the Summer Courses. The former, which were established in 1909, are conducted during the regular session in the afternoons and on Saturdays. The latter have been conducted since 1911. The new degree will be open to men and women on equal terms. In the Summer Course, work in Home Economics will be a part of the new department. The regulations concerning matriculation and the curriculum will be determined by a special advisory committee of the faculty. The title of Director of these courses has been assigned to Prof. Edward F. Buchner, who organized and has conducted both of these branches of the University's activities.

Nurses Associations. The American Nurses' Association, The National League of Nursing Education, and The National Organization for Public Health Nursing held a combined meeting and individual meetings at San Francisco June 20-25.

At the general session for all these associations, well known medical men, nurses and educators discussed these important subjects: Visiting and Household Nursing, Coöperation between Nurses' Training Schools and Other Schools, The Contribution of the Medical Profession to Nursing Education, Administration of Registration Laws, The Nurses' Part in Infant Welfare Work.

These subjects were subdivided and others taken up at the meetings of the individual associations.

The Penny Lunch. A teacher in New York writes as follows concerning the school lunch work in which she was engaged last winter.

"The lunch room work was inaugurated as a help for the poor, during the winter months. The work is good practice in buying and cooking in large quantities. All our regular work in cookery has stopped temporarily, and the children in the cookery classes help to prepare the food for the lunches. This is an admirable opportunity to adjust oneself to circumstances.

"Our average number of servings is 350 per day, but we have served as many as 550 on some rainy days. Our menu each day is a soup or cocoa, stewed fruit, bread and rolls, making a total cost of three cents for the lunch.

"The kindergarten children come to us at eleven thirty. The girls who are in the cooking classes at that hour take charge of these children. Each girl mothers one of the little ones, sees that the child's tray is filled, and then takes it to our second kitchen where the children are seated and fed.

"The other children come to us at twelve. They are served and go with their trays to the class rooms on the same floor with the kitchens."

Baby Week. The Civics, Home Economics and Public Health Departments of the Federation of Women's Clubs, in coöperation with the Federal Children's Bureau, are to have a Baby Week from March 4 to 11, 1916. The Children's Bureau are offering plans and suggestions for this baby campaign.

Details will be found in the General Federation Magazine for November.

University of Chicago. Prof. Julius Stieglitz of the Department of Chemistry of the University of Chicago has been made chairman of the department to succeed Prof. John Ulric Nef, whose sudden death occurred in California in August. Those Home Economics students who have studied with Prof. Stieglitz either in organic chemistry or advanced food work owe much to his clear, concise methods, and have the greatest respect for him both as a teacher and investigator.

Brief Notes. The National Association of Corporation Schools held its third annual convention in Worcester, Mass., June 8-11. Reports were given by the committees on Trade Apprenticeship Schools, Special Apprenticeship Schools, Accounting and Office Work Schools, Advertising, Selling and Distribution Schools, Hygiene, Health and Coöperation, Employment Plans, and Vocational Guidance as a Scientific Study.

Miss Farmer's School of Cookery is now being conducted by Miss Alice Bradley. The fall term opened October 4; the winter and spring terms will open January 2 and March 14, respectively.

Prof. Kathryn Gordon, B.S., Simmons College, 1915, has accepted the chair of Household Economics in Franklin College, Indiana.

The books, *Selection and Preparation of Food* and *Food and Nutrition* by Miss Isabel Bevier have recently been revised. *Food and Nutrition* may now be obtained from Whitcomb and Barrows, Huntington Chambers, Boston, Mass., and *Selection and Preparation of Food* will be ready shortly.

Salaries received by young women graduates of the Home Economics course of the University of Wisconsin range from \$750 to \$1000 for the first year's work, up to \$1500 for the third year of employment.

Miss Eloise Parsons of Clarinda, Iowa, is the young woman whose record in the Department of Agriculture's garden and canning clubs was the best of the thousands made by members in the 33 northern states. Miss Parsons obtained a yield of 5318 pounds of tomatoes from her tenth-acre plat. Her costs were \$15.61, and her net profits were \$115.57. Her costs cover every item of expense in raising the crop, including rent of land, her own time (estimated at 10 cents an hour), fertilizers and sprays.

A weekly weather forecast designed especially to aid farmers in planning their farm operations and shippers of perishable products to handle their goods with reference to expected weather conditions, has been inaugurated by the United States Weather Bureau. The bureau also has arranged a system whereby the forecast is taken Tuesday and reaches the weekly newspapers, especially in the corn, wheat and cotton districts, by mail on Wednesday morning—which is in time for the greatest number of them to use the information in their weekly editions.

THE
Journal of Home Economics

For those interested in Homemaking, Institution Management,
and Educational Work in Home Economics

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AMERICAN HOME ECONOMICS ASSOCIATION

STATION N, BALTIMORE, MD.



Kitchen



Hostel

GIRLS' HOSTEL IN CHRISTCHURCH, NEW ZEALAND (see page 542)

THE Journal of Home Economics

VOL. VII

DECEMBER, 1915

No. 10

THE AIM OF TEXTILE TEACHING¹

NELLIE CROOKS

Director of Home Economics, Milwaukee-Downer College

In all business enterprises there comes a time when account is taken of "stock on hand." The success or failure of different methods is then noted and plans are made for the future.

Have we not come to a time in the teaching of textiles when we should look over the work that has been done and see if we have accomplished the desired end?

At no time has the successful attainment of our aim been of more importance than now, for the present conflict in Europe is making everyone feel the need of retrenchment in household expenditure as never before. This burden of retrenchment falls most heavily on women. Are we giving our students the knowledge that will enable them to meet the difficulties that will confront them? Is their knowledge of values definite enough to make them intelligent buyers? Some time ago in one of our magazines a letter was published telling of the knowledge the consumer abroad has when she wishes to buy. The writer says:

I was deeply impressed, while visiting in Holland, by the judicious manner in which the young women of the family went about their marketing and shopping. Each article had its test, each material its standard. The entire system of housekeeping in each of the several middle class homes was a matter of regulation and familiar rule. Since that time I have bought no single article without inquiry as to the place and manner of its manufacture.

¹ Presented at the Eighth Annual Meeting of the American Home Economics Association, Seattle, 1915.

I have found a large number of salespeople who practically know nothing of the goods they handle. Numbers are obliged to seek information of those higher in authority. Whenever I have found a man who knew his stock, its merits and its faults, then I have purchased.

How are we to make our students as intelligent buyers as these thrifty Hollanders? How are we to instill into them in the short space of time at our disposal an acute perception of good and bad quality? Such acuteness is imperative at the present time, for we daily find materials masquerading for what they are not, and we discover that the goods we buy do not stand the test of hard wear. All this skilful concealment of inferior quality in goods makes buying a mere lottery for the untrained, yet a definite remedy for the evil seems difficult of attainment.

Pure textile bills have been introduced into Congress from time to time, but they are generally so intricate that they would be very difficult to enforce. The most practical measure is the Mills and the Merchandise Marks Act signed by Governor Whitman of New York State in May, to take effect in September, 1915.

By this bill any firm or corporation giving an untrue or misleading advertisement, or a statement of fact that is untrue, deceptive or misleading, is guilty of misdemeanor, punishable by a fine of not less than \$25 or more than \$1,000, or by imprisonment, or both. It resembles the British Merchandise Marks Act, which has been so successful in England. The need for some national measure like this state law is brought forcibly to me when I think of a visit to a hat factory where men's Derby hats were made in great quantity. As the hats were finished, labels were put in the crowns, marked "Made in London"—"Made in Vienna"—"Made in Budapest." You could select from the same group a hat presumably made in countries thousands of miles apart.

The most hopeful sign of the times is that retail clothiers are feeling the necessity of paying attention to material as well as to style in their garments. An article in the *New York Times* of June 6 makes the following statements:

A glance through the printed announcements of nationally advertised brands of men's clothing reveals the fact that, in the majority of cases, style and tailoring are featured almost exclusively. The public has been taught to ignore the *fabric* of which a garment is made. A prominent retailer has called attention to the need of giving better cloth values.

There has been a complete revolution in the consumers' method of buying. Formerly a man in selecting a suit wanted to be perfectly satisfied that the cloth would stand wear. His next thought was to get a pleasing pattern, and then he decided upon the style of garment he desired. The order has been reversed, and the order of consideration in most cases now is style, pattern, cloth, with very little attention paid to the last item.

A leading young men's clothing house in Chicago, that has been especially persistent in putting forward its claim to style distinction and leadership will shortly start a campaign of education to inform the consumer of the varying merits of cloth. This firm believes that there is a market, and a good one, for suits selling over \$25. The tendency right along has been to impress the consumer that the finest fabrics and workmanship are obtainable at prices ranging from \$15 to \$25. It is hard to see, under the existing limits on the prices to be paid for fabrics going into garments to be retailed at these figures, how the claims of such houses can be substantiated.

The clothing firm mentioned above has established a laboratory for the testing of fabrics which are bought. In the future a cloth that passes a certain test will be labeled "doubled service," and the consumer will be enabled thereby to get material in this suit that will stand hard usage.

That the aim of textile study is to make more intelligent consumers is a conceded proposition. If it be true that 50 per cent of all students leave school at the end of the sixth grade, and that only 2 per cent enter high school, we need some definite, though necessarily simple method of teaching values even in the grades. Generally the technical side of sewing is dwelt on and very little time is spent in studying materials. When simple tests and charts are made, as in Rochester, New York, the work is definite and helpful. In the high schools, the time devoted to textiles is usually a part of the sewing period. The students are taught, but do not feel certain that their knowledge is always reflected in the purchases, or that their usual standard of value is not style rather than wearing quality.

In colleges where Home Economics is taught, textiles is generally a separate subject. But even here do results show that we have emphasized enough the responsibility of spending money?

We are all consumers, children as well as older people. Very often, too, the young are purchasers as well as their elders. The children of foreign parentage are in many cases the shoppers for the family as they are the ones who speak English. We find high school girls buying the materials for their dresses or instructing their obedient parents as to what to buy. The college girl usually selects her own wardrobe.

So the further question arises: why does not our teaching have more influence on this small army of purchasers? There seem to be, in brief, three factors that mitigate against the success of our efforts.

1. The constantly changing styles that make the purchaser indifferent to the wearing quality of what she buys.

2. The lack of money responsibility on the part of most girls.

3. The lack of definite knowledge of standard materials, due to not seeing and handling them enough, and the lack of simple tests, that can be quickly applied in the store or in the home.

The teacher may offset these difficulties by efforts in the following directions:

1. Endeavor to teach, with the help of the Art Department, that there is beauty in simple style and that there is more beauty in good materials than in the latest fad.

2. Advocate that parents give their children an allowance for dress instead of permitting them to have charge accounts at the store.

3. Spend less time on the study of processes and machinery, and more on the finished products, learning to know standard materials and weaves by handling and rehandling large pieces of goods and by testing and retesting. Visit stores as frequently as possible so as to get the "feel" of goods in the fingers.

I speak feelingly on this subject for the reason that at the close of the year's work in textiles, with college girls, I submitted this question among others to my students: "What do you think could be added to this course to make better consumers?" The reply was practically unanimous: "More visits to stores, more tests, too, that could be used at the stores and at home, and more handling of materials." This, after I had spent what I felt to be an undue amount of time on finished material!

Yet in reality the reply proved that the principle at the basis of the course was correct, and showed, moreover, how keenly the students recognized their need of such instruction in the actual judging of materials.

This brief paper is in itself a summary of our aims and our main difficulties. If, however, any final words are needed, those words should be: courage and perseverance. Courage, in constantly insisting that the amount of practical knowledge gained is the real result of our toil; perseverance, in drilling, testing, practicing our pupils, then perseverance, and perseverance again, in putting the students through this practice work, once, twice, innumerable times.

FOLLOW-UP WORK¹

SINGLE TALKS AND BOY AND GIRL CLUBS

MAMIE BUNCH

Extension Department, University of Illinois

The best extension work is that which leaves the community doing most for itself. In Illinois, the day of the single talk for mere entertainment or for creating enthusiasm is well nigh past.

We are fortunate in having specialists in various phases of Home Economics on our extension staff, and when calls come for single talks from different parts of the state, we find out before assigning the speaker what phase of our work will be most desirable in that community. The speaker has always in mind the fact that her work is merely an introduction to what the community may be expected to accomplish.

It is our thought that each neighborhood has within itself all the necessary ability for its own development, and that we who come to them from the University, come not to do their work, but to give to them, from a broader experience than theirs, suggestions for constructive work which they themselves are to do.

We have on our staff a trained nurse who is also a graduate from the Home Economics Department. She takes up the problems of house sanitation, home emergencies, the relation of food to health, pure water supplies, and personal hygiene. As a result of her talks, cleaning-up campaigns, better babies contests, and camp fire girl clubs have been organized to further the development of the community. Town water supplies, and wells in private homes have been examined, wells and cisterns have been properly capped, and deep wells sunk.

As a result of single lectures on foods there has been almost invariably a call for a movable school. The movable school has resulted in a neighborhood demand for the teaching of Home Economics in the public school. Single talks on household management, on home conveniences, and on the relation of income to expenditures, do not always show definite and immediate results in the home, but they have created a desire for more general instruction in such subjects.

¹ Presented at the Eighth Annual Meeting of the American Home Economics Association, Extension Section, Seattle, 1915.

Single talks and demonstrations in textiles have undoubtedly brought about more intelligent purchasing. We show, for instance, sheets, custom-made, in which the fabric can not be duplicated in the retail market for less than two to eleven cents more than the ready-made sheets cost. We also show house dresses costing from \$0.65 to \$1 in which the materials duplicated at retail cost more than the ready-made dress, while the making at home consumes from five to seven and one-half hours. It is our purpose to call the attention of home women to the value of their time, and to suggest how the hours saved to them can be profitably spent. A \$15 blouse with really fine needle work in it can be duplicated at home for \$3, and the exquisite needlework may become a medium of real self expression for the home woman. In contrast to the dresses we exhibit various home conveniences as sewing screens, and shoe and laundry bags, costing as much again in the market as if made at home.

On the subject of shelter we are trying to get our rural people to use to better purpose light, air, and water, the cheapest and most neglected of commodities. Both the instructors and the women in charge of local organizations report to our office what they consider the best way of following up instruction in the community in question. Instruction concerning ventilation by heating systems and by windows, the use of screens, sewage disposal, the installation of simple shower baths, and of a water system, has been effective in many communities. A rearrangement of the working area to lessen the housewife's expenditure of energy has been effected in many country homes.

As to the Boy and Girl Club movement, the definite thoroughness with which an enthusiastic organizer is followed up determines its success or failure.

In Illinois the Garden Club work of Mr. Tobin, County Superintendent of Schools in Cook County, has been so successful as to indicate that the public school system is the most efficient agency through which to secure follow-up supervision. The Junior Extension therefore has been organized as a separate branch under the College of Agriculture, with its own state leader, who purposes to work with the public schools wherever he can secure their coöperation. It is thus removed from the Home Economics department, except that we coöperate by furnishing canning demonstrators, lesson plans for sewing clubs, and in similar ways.

In the University of Illinois we have a community adviser, who brings to us his knowledge of rural conditions in various parts of the state. Every department of the university, indeed, coöperates with the extension service, and perhaps the greatest evidence of the effect of the follow-up work of single talks is the fact that the work of the Household Science Extension Department this year has been seven times as great as it was last year, and the further fact that communities and individuals are constantly sending to us for specific aid or advice to meet their particular conditions. The single talk or demonstration to be effective must indicate how to meet very definite needs in the simplest and most practical manner.

FOLLOW-UP WORK¹

NEALE S. KNOWLES

Extension Professor of Home Economics, Iowa State College

The purpose of the single lecture in Home Economics is to create interest in the subject. It can serve only as an eye-opener. For that reason the single lecture must be very carefully planned and must be strengthened by demonstration or by illustrative material when necessary. The lecture must be adapted to the needs of the people if it is to create a desire for Follow-up Work.

The successful lecture leaves the individual with a desire to act, an inspiration to do something worth while. Follow-up Work must be presented at such a time and in such a manner as to aid the individual in carrying out the lines of thought suggested: The Follow-up Work must suggest subject matter for study, give aid in preparing outlines and securing reference books and bulletins and must point out some definite lines of work to be accomplished.

The three-day or the five-day demonstration and lecture course follows the single lecture quite logically and is a method of Follow-up Work that is quite generally used. This line of work affords an excellent opportunity to coöperate with the librarian in the town, to

¹ Presented at the Eighth Annual Meeting of the American Home Economics Association, Extension Section, Seattle, 1915.

interest her in Home Economics books and through her to acquaint the women of the town with those books already on the library shelves. This often demonstrates the fact that many valuable books have not been used by the women of the town. One very important line of Follow-up Work is this study and comparison of Home Economics books and the planning of a homemaker's library.

The Follow-up Work must recognize the business of homemaking as a profession and must provide opportunity for the study of the various phases of the subject. For this reason the homemaker's library must include books on food, textiles, sanitation, care of children, house plans, house furnishing and home management. It is the purpose of Follow-up Work to demonstrate the fact that Home Economics is not simply cooking but is the study of "Right Living."

In response to a brief questionnaire sent out the following information was received:

California writes that they have done much with the organization of study clubs. This organization followed the single lectures and demonstrations. Another state mentions the same plan and states that Home Economics workers from the Agricultural College meet with the clubs at stated intervals and thus direct the study clubs.

Missouri reports that their follow-up work is through the organization of Home Economics Clubs. These Home Economics Clubs are organized through the county and it is their aim to form federated county clubs. Missouri sends out the package libraries from the University.

Many states make use of the traveling library commission. The teacher who puts the homemaker in close touch with the traveling library, the bulletins from the Health Department, the Federal Departments and the State Food Commissions, is giving the homemaker real, practical help.

Maryland speaks particularly of the five county agents and the organization of girls' clubs.

Wisconsin reports very successful county women's clubs. The state provides courses of study, leaflets and programs, for clubs that wish to plan their single program or their year-book. Wisconsin has four workers on full time.

Idaho speaks very enthusiastically of the parent-teacher clubs. In fact, many states speak with great enthusiasm of this strong tie

between the school and the home. Idaho also speaks of the movable schools.

Many states speak of bulletins as a means of Follow-up Work. The bulletins serve as reference books and prevent the necessity of note taking during demonstrations. Note taking is difficult for those who have been out of school for many years.

Utah reports the Home Economics Association, many Home Economics study classes, contests, correspondence courses, and monthly leaflets. These monthly leaflets are in the form of lessons.

Massachusetts reports a correspondence course in preparation and other plans which will be in full working order presently. The work is quite new in Massachusetts.

Wyoming reports the formation of Home Economics clubs following the single lecture. New Hampshire reports this same plan as their best means of Follow-up Work.

Nebraska and New Mexico report organization of clubs, suggestions for club study, programs and list of books, and movable schools.

Vermont is preparing a correspondence course.

Kentucky reports one-day demonstrations and lectures at present; the Follow-up Work to come later.

In Iowa, we begin with the lecture, the bread contest or the single demonstration. The three-day or the five-day short courses follow this. The organization of girl's clubs and women's clubs is aided by study outlines, bulletins and lists of books. The farm tour, which we speak of as the June Tour, is a very profitable sort of Follow-up Work. This takes us directly to the home and gives the homemaker an opportunity to show us the equipment that she particularly likes and to tell us of her plans for improvement. It gives us an opportunity to make suggestions and gives the women of the neighborhood an excellent opportunity to exchange ideas and experiences.

In all of our Follow-up Work, we make every effort to establish a very close relationship between the homemaker and every source of available help. This help may come from the community, the state or federal sources. It is the chief purpose of all Home Economics Follow-up Work to suggest topics for study, to make the homemaker familiar with sources of valuable information and to help her to make the best use of that information.

FIELD WORK IN BRIMFIELD¹

ALICE R. DRESSER

At Brimfield, Massachusetts, a typical New England township, an experimental project in farm home demonstrations was carried on from April 1 to July 1, 1915, under the joint direction of the United States Department of Agriculture and the Extension Service of the Massachusetts Agricultural College. The purpose of the study was to learn what effective measure might be adopted to help rural and especially farm homemakers to solve some of the most pressing problems of housekeeping and homemaking.

The function of the home is to develop and maintain efficient conditions for service in each member of the family. To this end the homemaker needs to fit herself to be a competent wife, housekeeper, mother, and citizen; to adopt a *professional* attitude toward her responsibilities. She needs to formulate a definite ideal of homemaking; to realize the need of a vision of her opportunities. Such a vision furnishes the inspiration with which to meet her daily problems. Without it no woman can be a well-rounded homemaker and infuse into her daily activities the influence which it is her highest responsibility to exert. Great emphasis is placed on this point.

To develop the project a small group of townswomen was called to a conference by Miss Laura Comstock of the Massachusetts Agricultural College. These women agreed to coöperate with the field agent, by inviting her to their homes and by working out suggestions bearing on various aspects of homemaking. Semi-monthly meetings were held in the library, to which young unmarried women as well as high school students were invited with an attendance increasing from thirty to fifty-four. At consecutive meetings the subjects of kitchen planning and equipment, laundry processes and equipment, foods, clothing, sanitation, and safeguarding the young by instruction in sex hygiene were discussed. Forty homes were visited—fourteen village homes and twenty-six farm homes.

In all visits the agent kept the attitude of coöperator, one who desires to confer with the housewife, and is equally interested to solve the universal problem of the homemaker.

¹ Presented at the Eighth Annual Meeting of the American Home Economics Association, Extension Section, Seattle, 1915.

No hard and fast order of subjects was followed in visiting. Both as regards choice of subjects and the number of visits made to each home, the decision was left to the discretion of the agent. She sought invariably to be guided by what she deemed the greatest need of the individual family and the avenue of approach by which she could best gain an influence. Invariably all suggestions were made from the professional viewpoint, and the ideal of homemaking was kept in mind.

A marked spirit of interest and coöperation was in general evidence throughout the period. This group appreciated that to a large degree the success of the experiment depended upon their coöperation. Furthermore they evidenced an appreciation of the fact that upon the results of this project depended somewhat, at least, future plans for similar work throughout the country.

Among tangible results of the experiment women were helped to formulate ideals of homemaking, and consequently to think of homemaking in its larger relationship as a preparation for citizenship. Housekeepers were helped to break from tradition in methods of work; in kitchen arrangements and equipment; in types of foods served, and of garments suitable for young children and for women who do their own housework; and in the elimination of useless "things." Some mothers developed a keener interest in school matters and saw in clearer light the close link between home and school. The beginnings of a professional attitude toward housekeeping were made by establishing its proper relation to homemaking; by stimulating an interest in reading bulletins and magazines, and in the discussion among themselves of homemaking problems.

This type of work with homemakers affords an avenue of helpfulness which is limited only by the individual worker's capacity to sense opportunities and by the degree of her training and experience with which to meet the need. Women are rapidly waking to the fact that the responsibilities of homemakers are inseparably linked with the general interests of their immediate community; that each wife, each mother, through her various avenues of responsibility, is preparing individual lives for their duties as citizens; that she cannot divorce herself from her share of civic responsibilities, all of which touch at some points individual homes and persons of all ages. To catch the vision of this ideal is sufficient to stimulate in womankind generally a conscientious devotion to its realization through every avenue which is open to her.

LIFE IN RURAL FRANCE

Concluded

Compiled by HELEN W. ATWATER

United States Department of Agriculture

This article was begun in the August-September JOURNAL. In that number, the quotations from "The Fields of France" by Mme. Mary Duclaux describe the peasant life in Auvergne. In this number the quotations tell of twentieth century country life in the "garden of France."

Very different are the surroundings in the "Manor in Touraine" where the writer delights to spend the golden autumn with the friends who own it. It is a historic place, originally a commandery of the Knights Templar, "an old, irregular house, a long grey line in the hollow, founded by the Templars some eight hundred years ago and finished yesterday," and still retaining the charm of old associations in spite of modern comforts and additions. Like most estates in Touraine the house is set in a park, but has also its more homely lawns and gardens.

Turning, you cross the moat, inseparable from every ancient manor-house in France, you pass the orangery with its terrace, where the trees stand out in pots all summer, and so you arrive at a series of large walled gardens or *potagers* [vegetable gardens]. You enter by a *rosarium* where, well to the south, sheltered by stone walls draped with peaches in espalier, the roses grow profusely, not trained over walls or arches, nor cut into standards, but somewhat wild and bushy, just as Nature made them. Invisible at their feet, flat beds of mignonette, verbena, violet and heliotrope give odor; for the rose is a fast flower of its smell, as Lord Bacon noticed (when writing of gardens one may surely quote him twice): "And you may walk by a whole row of them and find nothing of their sweetness." From the rose-garden starts a long rectangle of three walled *potagers* in a suite, opening into each other like a set of state rooms. The walls of all alike are trained and pleached with fruit trees, and more especially, in this first one, with vines: trellises of grapes, purple and white, and that small golden sort called Chasselas, whose flavor is perhaps unrivalled. The three gardens communicate by means of arched gateways, through which—right through from end to end—runs a broad gravelled walk, set on either side with deep, high banks of common flowers for cutting, such as roses, chrysanthemums, zinnias, asters, phlox, dahlias, and cannas, tall Paris daisies, freesias, and autumn lilies. Behind this varied screen stretch the

beds of fruit and vegetables, strawberries and raspberries, which ripen on into latest autumn, melons and asparagus, artichokes and cardoons, green peas, French beans and scarlet-runners—such, in fact, as make some decorative show; for this first garden is a favorite place for sheltered walking. To the second garden are relegated the salads of different sorts: lettuce and *romaine*, spinach and sorrel, scarole, celery and chicory, capucin's beard and *bette* and endive; while in the third grow the cabbages, carrots, turnips, parsnips, Japanese crosnes, Jerusalem artichokes, Brussels sprouts, onions, leeks, potatoes, and their kind. Above the suites of gardens, which occupy the lower slope of a gentle rise, runs a natural fringe of copse-wood; below, the upper road from Tours to Ballan divides them from a considerable vineyard, which bears, on a little holm, a fourth walled garden, or *clos*, filled with orchard trees of a finer sort than those planted everywhere about the fields. This is especially sacred to those golden plums for which the country round Tours is celebrated.

Close to the kitchen gardens of the Commanderie lies the farmyard, a picturesque and pleasant place where I love to loiter of an afternoon. In the middle stands a squat round tower of considerable girth. Whatever it was of old (gateway, tower, or colum-barium [dovecote]), today it is a dairy, chosen for this office on account of the mighty thickness of its walls and consequent evenness of the temperature within. The vaulted roof of the ground floor is lined, like the walls, with bright enameled tiles, blue and green; the flags are laid with such evenness that not a speck of dust can shelter there in any cranny; tables of lava support the spotless vessels for the milk; the churns and separators are as neat and dainty as if they stood there not for use, but for ornament. How different from the rough and (truth to tell) the grimy floors, the squalid deal bench, the primitive churns and cheese-wrings of our wind-beaten mountain *burons* in Auvergene!

How charming are the *gros bourgs* of Touraine—Vouvray and Montrichard, Savonnières or Ballan—with their neat white houses, built of freestone topped with slate, a raised flight of stone steps leading to the door, and large ornamented windows, one or two on either side the entrance; there is a trellised vine up the front, there are flowers in the garden, fruit-trees everywhere! These villages have brought prosperity to the very brink of poetry. Once I spent five weeks at Chenonceau, living at the village inn, a humble place enough,—the “Bon Laboureur.” The rooms were rough and homely, with tiled floors, straw-bottomed chairs, and old-fashioned furniture of waxed walnut; but seldom have I dined better than in that rustic parlor. It is true that I was young then, and very happy. The tenderest fowls, the most melting and juicy of melons and green

peas, the freshest eggs for boiling or for breaking in an omelette, the most savory *rillettes*, the lightest white bread with fresh yellow butter, the tastiest ham, the richest abundance of peaches, grapes, plums and pears, composed our rustic diet. We thought Chenonceau a little paradise. To know a country-side one must know every class in it; therefore, not content with my five weeks in a village inn, or with some twelve summers' experience of life in a manor, I have written to a friend of mine (for before her marriage she lived five years in my service), who is the daughter of a small farmer in Touraine, asking her to send me the daily bill of fare in a cottage. She replies: "The peasants live uncommonly well in Touraine. Two or three times a day, according to the season, they have an excellent meal consisting of soup—generally cabbage-soup—followed by a dish of beans and bacon, or a ragout of mutton, or a piece of braised beef, or maybe a fricassee of veal or a civet of rabbit, but meat of some sort, and very seldom merely bacon; for dessert, they have goats'-milk cheese, for every farm has its goats, with fruit, and plenty of common red wine, for every cottage has its acre or so of vineyard."

In fact, by force of circumstance, every dweller in Touraine becomes, for the time being, more or less of an epicure. To arrive there in October from our Cantal mountains is a startling change of scene. On our summits, perhaps, already the snow has shed its first fresh whiteness; a few pears and apples ripen reluctant in the orchards; and if the garden yield is carrots and cabbage, we scarcely dream of more. In Touraine the very hillsides run down with bunches of ripe grapes; the fruit-trees by the road bow beneath a weight of pears and plums. The peaches hang against the garden walls; the raspberry-canes are rosy still with fruit. It seems an Eden of plenty and mellow fruitfulness. And there would be a blank ingratitude in taking no delight in these rich offerings of Mother Earth. It is natural here that one's fancy should play about the preparation of a future meal; we feed the turkeys with walnuts all October to ensure a feast for Martinmas; we walk in the *potager* and criticize the matting of the handsome *cardons*: we see to the banking of the celery. So near to such an ample Nature, a sort of poetry invades these homely details, and the daily meal becomes, not just a dinner, but a pious banquet offered up in praise of Ceres.

A large family is a source of wealth to the farmer, who has to pay five pounds a year to his herdboy or goose-girl, ten or twelve pounds a year to the maid who helps his wife, and sixteen pounds a year to every laborer and ploughman, in addition to their keep. So when the farmer really is a farmer and cultivates his neighbor's land, his quiver is well plenished, as in Auvergne. But in Touraine the peasant works on his own land; and

the dread of having to divide that treasured morsel, dearer than wife or child, sorely limits his descendants. A law permitting a greater freedom in the making of wills would certainly be followed by an immediate increase in the rural population. The French as a nation are lovers of children and hoarders of money. Who would not multiply the curly heads around the bowl of cabbage-soup, and save by the same stroke the money spent in wages?

Positive and superstitious, slow and sure, subtle, cautious, and independent, the laborer of Touraine is a character apart; so different from our rough and genial farmers of the Cantal, that it seems strange to think that one and the other are just peasants of Central France. The elder women of Touraine are dignified and lovely to behold in their long circular cloaks of black cloth, and the fine conch of muslin that discreetly veils the hair. One charming young girl, born to this decorous and dainty costume, used to wear on Sundays (when I knew her) a singular erection of chip, ostrich feathers out of curl, and pink muslin convolvulus. One day I regretted the earlier head-dress. She replied: "Never again, madame, never again! The first day I went into Tours settled that question. Those idle people on the Rue Royale looked at me with a sort of pity (or, perhaps, as you say, ma'am, it was admiration, but I found it very wounding), as if I existed for their entertainment, rather than on my own account."

Chinon, which lies a little south of Ballan, is the richest part of all the plain. It is the ample garden of France, beloved of Rabelais, and a land of rich dessert: wine and walnuts, grapes and almonds, plums and pears. If you pass in September, the orchards present a busy scene; the yellow Catherine plums are then in their perfection of mellow ripeness; they are gathered by hand with dainty care, laid to dry in the sun on wicker trays or hurdles, and baked several times in a baker's oven before they issue thence in the shape of dried fruit for the table in winter: the famous "Pru-neaux de Tours." Not only the Catherine plum, chiefly grown for drying, but the delicious Reine Claude, golden hued and splashed with carmine, the Agen plum that's red and blue, and the Golden Drop, abound in these orchards; for the hardy plum-tree, that will grow anywhere, demands for its perfection a land of wide airy valleys and low-lying southern slopes. The plum is made for Touraine, and Touraine for the plum; 'tis a happy marriage. In autumn, the orchards drop with fruit, the slopes are covered with the turning vine; the laden pear-trees stand round the fields, which are high with maize and clover sown for fodder after early harvest; and every farmyard, in the angle of its wall, shows a huge heap of those great ribbed and golden gourds, large enough to contain the fairy coach of Cinderella, which feed the kine with pumpkin-soup all winter.

In all the comfortable *bourgeois* houses that I visit, as in the manor of Touraine, life runs as easy, as regular, as if on wheels of clockwork. Every one seems pleased and happy, and I have long since come to the conclusion that the real art, the real wealth of France, are just this universal amiability of temper. Nothing happens, yet every one seems busy and amused. The young people shoot and play tennis of mornings (they still play tennis in France), or ride their bicycles, or mount their horses; the elders write letters, read the papers, stroll in the grounds, eat grapes from the trellis for a morning "cure;" the ladies smile and sit about arrayed in wonderful morning gowns, embroidering strips of mysterious and beautiful needlework. A great capacity for sitting about and smiling, an ability to embroider anything, from a shoe-bag to a set of curtains, is a part of the equipment of every well-bred Frenchwoman. Conversation in all its branches is the national game in France, played on all occasions by both sexes (especially together), and they are as clever here, and as easily first, as we in the cricket-field. Frenchwomen, as a rule, are far superior at the piano to Englishwomen or Italians; every little circle possesses its musician of considerable merit, and in almost every country house we may be sure of finding at least one lady, reading her music as lightly as her novel, and possessing a vast repertory of symphonies and sonatas which she plays with a just and fine understanding. How many an enchanted hour will she while away with Beethoven, Schumann, Wagner, César Franck, greatest of modern masters, or, perhaps, the idol of the hour, Claude Debussy!

My friends of the Commanderie have founded and endowed a cottage hospital, a perfect model of cheerfulness and hygiene. With its wide windows, its inner gallery for walking, its charming white bedrooms, its cane armchairs and sofas set about in the garden, whence the woods and vines are always fair to see, with its friendly Sisters in their white *cornettes*, and its mild fresh air, the *Hospitalité* of Ballan appears, less a place to be ill in, than most evidently a place to get well in. There is an operating theatre (as bright and speckless as the rest) with a private bedroom for paying guests: and this is by no means the least service rendered, for the farmers of Touraine, well off and independent, are wholly without provision in their homes for the weeks which follow, for instance, the necessary infliction of any large flesh wound: too often in their homes the microbe finds out that open door. In the winter and spring, when pneumonia and influenza work their will, the little hospital can contain some ten or eleven invalids. It is emptied in the warm summer months, and serves, when there are no sick in Ballan, as a convalescent home for many a worn-out shop girl or dressmaker's apprentice from Paris.

THE SMOKING TEMPERATURES OF EDIBLE FATS

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The smoking temperature of a fat may be defined as the temperature at which the fat gives off visible fumes. The value of a fat for deep frying depends in part on its smoking temperature, for if this point is not well above the temperature at which food will cook, the fat is objectionable for use in the kitchen. As the proper temperature for frying raw food in deep fat is 185° C. (necessary to brown a cube of bread in 60 seconds) and for frying cooked foods is 190° C. (to brown a cube of bread golden brown in 40 seconds) a satisfactory fat should not smoke until above 190°. We have found that the smoking temperature is not identical for all fats, nor is it constant for a given fat under all conditions, but as shown by the experiment below, varies with at least three factors—the acidity of the fat, the surface exposed, and the presence of finely divided foreign substances.

Our method of determining this smoking temperature was to heat the fat with a small flame in a No. 4 evaporating dish, the upper surface of the fat having a diameter of about $3\frac{3}{4}$ inches. A thermometer was suspended in the material and the melting fat was stirred with it to keep it evenly heated. The temperature at which the first slight fumes were visible over the liquid was considered the smoking temperature. After the reading was taken the fat was cooled and reheated and the smoking temperature again noted. It was found that successive readings could be taken in this way that either differed from each other by not more than 2° or 3° or, in many cases were identical. The results tabulated below represent the average of two or three, and in some cases when the checks were least satisfactory, four or five readings. It is thus seen that the method used was somewhat rough, but it was thought that the introduction of refinements would remove the experiment farther from cooking conditions and so not really increase the value of the results.

The fats used varied greatly as to their smoking temperatures, ranging from 234° for cottonseed oil and its products (crisco, snow-drift, cottolene) through the various grades of lard, to the much lower olive oil (175°) and peanut oils (162° and 149°), and finally to cocoanut oil (136°). The position of olive oil in the table is in

contradiction to the prevalent idea that this oil is especially satisfactory for frying because of its high smoking temperature. If it really is more desirable than other fats its value must lie in some property other than a high smoking temperature.

The observation should be recorded that the fats after heating to their smoking temperatures often continued to smoke after the flame had been taken away. This was not followed up with accuracy but it was noted in a number of cases that the fumes were given off until the mercury had fallen 20° below the smoking temperature.

TABLE I

KIND OF FAT	SMOKING TEMP. IN EVAP. DISH	FREE ACID, AS OLEIC
	<i>degrees Centigrade</i>	<i>per cent</i>
Cottonseed oil (Wesson).....	233	0.07
Snowdrift.....	232	0.06
Crisco.....	231	0.13
Leaf lard.....	221	0.15
Butter fat.....	208	0.28
Leaf lard (heated 5 hrs.).....	207	0.34
Bulk lard.....	194	0.51
A much used lard.....	190	0.61
Olive oil.....	175	0.92
Peanut oil I.....	162	1.10
Peanut oil II.....	149	1.64
Cocoanut oil.....	136	1.90

The fats used for these determinations were titrated for free acid. The usual method¹ was employed, that of shaking the weighed sample with 100 cc. of warm alcohol and titrating with standard alkali, using phenolphthalein as an indicator. In the cases of the dark colored heated fats, however, the use of the two indicators, phenolphthalein and alkali blue 6 B², made the titration much easier and more satisfactory. It was found convenient to use $\frac{N}{20}$ sodium hydroxide and usually as much as 15 grams of the sample of fat. The results (see Table I), of course, show much variation among the different fats. The cocoanut oil has the highest acidity with almost 2 per cent free acid calculated as oleic, then come peanut and olive oils, the lards, and last with least acid (0.06–0.13 per cent) cottonseed oil and its products in whose preparation alkali is used. These

¹ U. S. Dept. of Agr., Bur. Chem. Bul. 107, rev. ed. (1907), p. 142.

² Ztschr. angew. Chem., 24 (1911) no. 28, pp. 1297–1302.

results are in each case within the range given by Lewkowitsch³ for the different fats. The fats thus fall into exactly the reverse order from that obtained when their smoking temperatures are considered. The conclusion may therefore be drawn that the smoking temperature of a fat is closely dependent upon its acidity, the fats with the highest smoking temperature having the least free acid, and those with the lowest smoking temperature the most free acid.⁴ This point is graphically presented in the curve plotted from our figures for these two values.

It is further interesting to note in this table that the butter fat, separated from the rest of the butter by melting at low temperature and filtering, falls into a position consistent with its acidity. Thus the presence of the glycerides of the volatile fatty acids in butter fat has no influence on its smoking temperature. This is true also for the cocoanut oil, another fat of comparatively high content of glycerides of the volatile acids.³

Also noteworthy among the results is the fact that the sample of lard which had been much used in cooking had both a lower smoking point and a higher acidity than the fresh lard; and to a somewhat lesser extent, the same is true of the sample of lard (leaf) which had been heated in the laboratory for five hours at a temperature of 230–240°.

To confirm the dependence of the smoking temperature upon the free acid some of the olive oil was made neutral by treating it with sodium carbonate solution, extracting the oil by ether and evaporating. The smoking temperature of the resulting nearly neutral olive oil was the same as that of the nearly neutral cottonseed oil products, and 59° above that of the original olive oil.

Further, fatty acids were made from the olive oil by saponification and acidification. After standing over sulphuric acid in a vacuum desiccator titration showed them to be 95 per cent acid calculated as oleic. Small portions of this acid were added to the neutral olive oil and to the cottonseed oil, and the smoking temperatures of the mixtures noted. In each case the addition of acid resulted in the

³ Chemical Technology and Analysis of Oils, Fats and Waxes 5th ed. London: Macmillan & Co., 1913–1915.

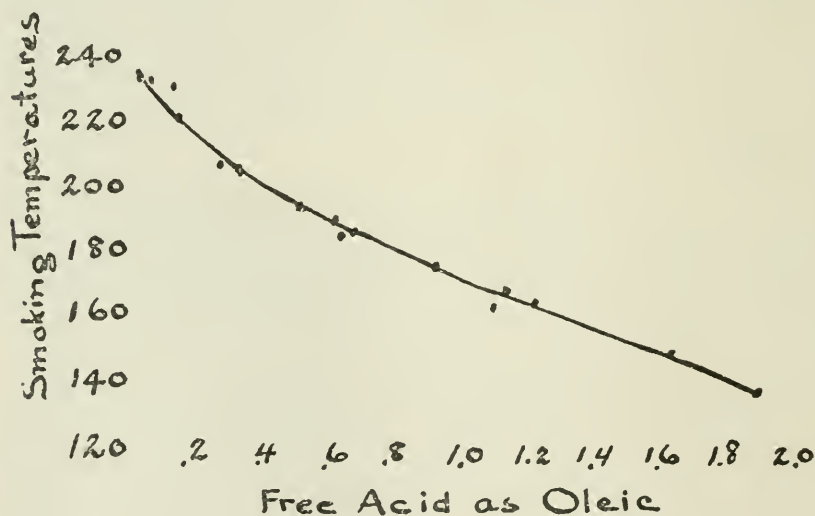
⁴ A similar relationship between acidity and the flash point of fats is shown by Lowenstein and Vollersten, Jour. Indus. and Engin. Chem. 7 (1915), p. 850. Their paper appeared after this paper had been accepted for publication in the JOURNAL.

lowering of the smoking point, and the larger the amount the greater the reduction. (See Table II.) Furthermore, the smoking temperatures obtained here were concordant with those of other fats of similar acidities. The curve shows the results graphically.

TABLE II

KIND OF FAT	SMOKING TEMP. IN EVAP. DISH	FREE ACID, AS OLEIC
	<i>degrees Centigrade</i>	<i>per cent</i>
Olive oil, neutral.....	234	0.03
Olive oil and oleic acid.....	184	0.64
Cottonseed oil and oleic acid.....	186	0.68
Olive oil and oleic acid.....	168	1.13
Cottonseed oil and oleic acid.....	164	1.22

Besides the acidity, another cause of variation in the smoking temperature was found to be the size of the surface exposed. Temperatures for several of the fats were determined not only in the evaporating



dishes but in small and large saucepans. In every case tried, increasing the size of the surface lowered the smoking point. For instance, the smoking temperatures for crisco were 231° in the evaporating dish (diameter of fat surface $3\frac{1}{4}$ inches); 220° in a sauce-pan (7 inches in diameter); and 206° in a large iron kettle ($10\frac{1}{4}$ inches in diameter); and the corresponding temperatures for the bulk lard were 194°,

183°, 169°. The lard which had been much used for frying fell from 190° in the evaporating dish to 182° in the saucepan and the olive oil from 175° to 161°. The total fall in the first two cases was thus 25°, and the fall in using the saucepan instead of the evaporating dish ranged from 11° to 14°.

Thus fats which give by the laboratory method of testing a sufficiently high smoking temperature for satisfactory cooking may easily smoke inconveniently low if the exposed surface of the fat in the cooking vessel be enough increased. The advisability is shown of always using for frying as small a vessel as feasible. Also this demonstrates the additional point that the high smoking temperatures claimed for their products by the manufacturers of certain cooking fats are apparently based upon experiments performed under laboratory rather than kitchen conditions. For instance, the figure used in the advertisement of one fat which we tested coincides exactly with our evaporating dish smoking temperature, but is 25° above that in our large kettle. Fortunately, even the lower value does not bring the temperature below that satisfactory for cooking.

To test further the dependence of the smoking temperature upon extent of surface, samples of olive and of cottonseed oil were heated in test tubes. The temperature was raised to the limit of the thermometer used—360°—but even then no smoke was visible, although tiny bubbles were rising throughout the oils so that they looked as if they were boiling. However, when the thermometers were withdrawn from the highly heated oils, the oils clinging to them smoked profusely. It would thus appear that the "smoke" is possibly an oxidation product of the oil or of the decomposition products obtained on heating. The subject should be further investigated. A marked odor of acrolein was obtained in these test tube experiments but was not noticeable at the lower temperatures of the other experiments. Moist blue litmus held over the test tubes in which the oil was heated turned slowly a faint red, as it also did in such of the evaporating dish experiments as were tested.

The roughness or smoothness of the pan had no effect on the smoking temperature of the fat. Four of the fats were heated in an old enameled saucepan of the same size and shape as the good saucepan used, but with a much cracked and chipped bottom surface. No differences were noted between smoking temperatures of the same fats heated in the two dishes under the same conditions. Nor were

differences in temperature noticed when a thin or thick layer of the fat was used.

The presence of several cubes of bread frying in the fat produced no change in the smoking temperature of the two fats which were tested thus. Of course much moisture came from the bread at first but the smoking temperature was not reached until after the evolution of the water vapor had ceased, so there was no difficulty in distinguishing between the water vapor and the smoke from the fat.

However, in contradistinction to this, the addition of 5 grams of flour or of animal charcoal did lower the smoking temperature. For a sample of cottonseed oil (smoking temperature 238°), the value when flour was added fell gradually to 133° , giving intermediate values on seven successive determinations. The lowering with the charcoal was not quite so great, but no satisfactory smoking temperature for the mixture can be reported, for the smoke came in puffs from various points and more or less frequently, depending on the speed of stirring, instead of showing evenly over the whole surface at a clearly marked temperature. Butter fat and lard were also heated with the flour. The values for the butter fat fell from 197° to 187° , with puffs of smoke at a lower temperature, and for lard from 180° to 167° . In line with these observations, it was noted that the smoking temperature for whole butter was 171° , the presence of the casein, etc., of the butter apparently having somewhat the same effect upon the fat as the addition of the flour.

The finely divided foreign substances, causing by their own larger surface a great increase in the surface of the fat, thus have an influence similar to the extension of the external surface by using a larger vessel.

After these fats were filtered it was found that their smoking temperatures were considerably higher than when the flour or charcoal was mixed with them, but not up to the original value for the fat. For instance, the cottonseed oil filtered from the charcoal smoked at 218° and from the flour at 168° . (Lowest smoking temperature with the flour 133° .) It is possible that a sufficiently fine filter was not used and that minute particles of charred material stayed suspended in the liquid. The acidities of three of these filtered fats were determined, but the results were erratic, showing an acidity for the butter fat the same as before heating and for the cottonseed oil greater than the original fat, but not consistent with the smoking temperatures found.

This lowering of the smoking temperature of the fat by the catalytic action of a finely divided foreign substance is in accord with Hviid's⁵ work on the destructive distillation of lard with and without a porous catalyzer "Kieselerde," or a substance used commercially to decolorize fats and oils. In his experiments the temperature, when his distillation began, fell from 350° for the lard alone to 280° for the lard mixed with two parts of the catalyzer.

It is thus seen that three factors of importance in regulating the smoking temperature of a fat are the acidity, the extent of the exposed fat surface and the presence of finely divided foreign substances.

Work on the chemical changes produced in fats on cooking is in progress in this laboratory.⁶

HALF PORTIONS AND WASTE

The serving to individuals in restaurants, hotels and dining cars of larger portions than can be eaten is often deplored by those who believe in the conservation of our food resources and the wickedness of waste. Where two may share an order the large portion is desirable but in the many cases where one is eating alone, to be forced to purchase more than one desires is a source of annoyance rather than of satisfaction.

A move in the right direction has been made by the Chicago, Milwaukee and St. Paul Railway in the introduction of half portions in their dining cars. This so-called "Plate Service" has been well patronized since its inauguration, and bids fair to become extremely popular.

Waste could further be avoided in commercial food projects, such as dining cars and cafés, by having more simple but better selected menus and better cooking. A "soggy" boiled potato, and pale, watery, tasteless roast beef, should be an impossibility instead of all too common.

Persons of discrimination and with cultivated food habits want, most of all, good, staple foods in reasonable variety, clean, well cooked, and decently served.

⁵ Petroleum, 6 (1911), pp. 429-436.

⁶ Laboratory of Food Chemistry, Department of Home Economics, University of Chicago.

GIRLS' HOSTEL IN CHRISTCHURCH, NEW ZEALAND

M. A. BLACKMORE

It seems necessary before describing the work of the hostel, to give a somewhat brief outline of New Zealand, its ambitions and accomplishments.

New Zealand is a group of two or three islands in the far Pacific. So far from other lands it looks on the atlas, as to seem almost on the "Edge o' beyond." Truly an isolated little country, yet by no means "out of it"—to use a colonialism.

Our small land, like small people, has a "guid conceit of itself," and claims to be not far behind the older lands in matters educational. In some cases she even feels that the Motherland might, with advantage to herself, follow the lead of her offspring. New Zealand is proud of her twenty years of female franchise, the old age pension scheme, the national provident fund, and free education from the primary schools to the universities. It is her proud boast that the child of her humblest citizen can receive an education equal to that of the wealthiest in the land, and that not as a special reward or concession to genius but as a just right to every New Zealand child.

Having thus shown what a lowly, humbleminded (!) people we are the writer will endeavor to describe some of the educational work carried out at the Technical College Training Hostel in Christchurch. The Hostel is situated some little distance from the college—perhaps a ten minutes' tram ride, and is of a particularly pleasing appearance. It has nothing of the air of an institution about it, but rather the appearance of a home, surrounded by lawns and gardens of some extent.

The Hostel is the practical training-home of the girls attending the Technical College. It is in charge of a principal, and three student assistants, who are training as teachers of domestic science. The girls, after having a course in domestic science at the College, are sent to the Hostel in groups—about twenty in each group—and they attend daily at the Hostel for several weeks. The time varies with the different classes. The Hostel contains two kitchens—a large one with an ordinary coal range, where the bulk of the cooking is done, and a smaller one where an oil and gas stove are in use.

For the work of the Hostel, the girls are again divided up into three

groups; each group being in charge of a student assistant. Each group in turn does housemaids' work, kitchen work and laundry work.

There is accommodation for about fifteen boarders—girls attending the College, and having to live away from home. Day begins at the Hostel at 6.30 a.m. The student assistants prepare breakfast, and, after certain duties, the boarders leave at about 8.30 a.m. for the College. Then the particular group in training from the College take their place. In the larger kitchen dinner is prepared for all the girls, with the exception of those doing the work in the kitchen, and some of the staff. In the smaller kitchen dinner is prepared and served by two girls for themselves, and those working in the larger kitchen. The cost of food, fuel, etc. is carefully entered by the girls each day, the accounts being checked by the assistants and then passed on to the principal.

The main building contains a sitting-room, a dining-room, a particularly charming oaklined entrance-hall; a sitting room, an office and bedrooms for the staff; and cubicles for boarders. Besides this there is a flat or cottage, containing a sitting-room, a kitchen, a dining-room, two bedrooms, and a bathroom—in fact, all that a small, up-to-date cottage would have. This flat is in charge of two of the students who have been through the course in the main Hostel. They have entire charge, plan the meals, buy supplies, and generally put to practical test the methods they have been taught.

After the midday dinner, an interval is allowed for games.

The girls in charge of the kitchen prepare any special dishes for tea, clean their kitchens, and make up the daily accounts. One afternoon a week they are allowed free for tennis, reading and other recreation. The afternoon is spent by the other girls, doing various kinds of sewing, fancywork, stencilling, basketwork. They are encouraged to work and think for others—and up to the present their contribution of clothes to the poor of Belgium has been a very creditable one. For some time, one afternoon a week has been spent in working for the soldiers.

The day students leave the Hostel about 4 p.m. The work of preparing tea is done by the boarders on their return from College. After home lessons, each evening of the week has its special occupation or amusement—music, dancing, games in the hall, reading and mending. This winter it is hoped that Swedish drill will be given.

One evening a month the girls entertain. They plan, cook and serve

the supper, and each girl helps with the entertainment of her guest. Saturday is mainly devoted to outings of some kind (picnics or sight-seeing), for most of the boarders are country girls.

On Sunday morning church is attended; home letters are written in the afternoon; Bible-reading and music bring the day to a close.

The artistic arrangement of the rooms, the tasteful and simple furnishings, and the plentiful use of flowers, all make the Hostel a very charming home. If even a small part of its charm is taken by the student to the making of her own home, the Hostel has justified its existence. There is such an air of quiet activity and cheerfulness about the Hostel, with no show of irksome authority. Yet how firmly and kindly the hand of the principal guides and controls each girl!

Surely never was domestic science learned under happier conditions than it is by these young homemakers-to-be. Seeing it all, one could wish that the years might roll backward to enable one's own training to be gained in as happy a way.

THE CONSUMPTION OF SUGAR

The consumption of sugar per capita in the United States is estimated to be more than ten times what it was a hundred years ago. During the past five years, the consumption has averaged about 83 pounds per capita. A hundred years ago the consumption of sugar varied widely. It was usually, however, between 4 and 10 pounds a year. Great Britain consumed 92 pounds per capita more than the United States in 1911, but France and Germany used far less, the per capita consumption being 39 and 42 pounds, respectively.

EDITORIALS

The Journal. The JOURNAL board in its report at Seattle offered some definite suggestions to the members of the Association.

1. That every college and normal student graduating be impressed with her need of the JOURNAL and her professional responsibility for subscribing to it. The initial rate (\$1) is available for such students.

2. That each member send in regularly news items of her institution, of new courses, of equipment, of additions to the faculty, of teaching methods.

3. That suggestions as to desired articles be sent to the editor. The JOURNAL is the Association's, not the editor's.

4. That the JOURNAL be recommended to every teacher, Home Economics worker and library within reach.

We beg that these recommendations be carefully considered by all those interested in the success of the JOURNAL.

We need more subscribers, more advertisers, more contributors, but most of all we need a live interest in this venture of ours. Such interest means that each one will do her best to keep us in touch with events and people in her own locality.

We want to know what research work you are undertaking, what problems you are solving in your own household, what problems you need help in answering. We want to know about conferences and conventions in Home Economics and related subjects.

In short we want to know about your section of the country just what you want to know about other sections.

Make us acquainted too with those who can help us all by their aid in answering the many questions that arise.

You must tell us the subjects you wish discussed—the topics that will be of practical help to you. What will help you will help others too. Yet you must remember that the JOURNAL represents a great many different interests and that all must have due recognition.

We beg for your patience—not with our mistakes; we are sure to make them, we will try not to repeat them, but we expect to be held responsible for them—but a patience that will make you suspend

judgment till you have the explanation of what may seem wrong, and till you know the conditions.

Above all we want every constructive suggestion that you can give us for bettering the JOURNAL. Will you help?

"America's Gifts to the Old World"—The American Home Economics Association's Newly-Published Pageant. In the October number of the JOURNAL announcement was made of the publication of a pageant or masque for Home Economics students, bearing the title "America's Gifts to the Old World." The authors, Miss Helen W. Atwater and Dr. C. F. Langworthy, gave the manuscript to the Association on the condition that it appear as a publication for the Richards Memorial Fund. This was done in the hope that the pageant might add to the endowment fund created in memory of the great service Mrs. Richards rendered.

The Council of the Association gladly accepted the offer and have published the pageant in accordance with the condition specified. The edition is not a large one, yet the sale of copies should more than pay for the cost of publication and yield something besides for the fund. Moreover, the Council hopes that the pageant will be presented often enough and under such conditions that the fund may materially benefit. The plan is to allow Home Economics students the use of the pageant for presentation without any royalty, on condition that a percentage of the proceeds from the sale of seats be turned over to the fund. If no admission fee is charged, it is expected that some other arrangement may be made satisfactory to the school and advantageous to the fund. If the pageant is presented by other schools, colleges, or clubs, not directly connected with Home Economics, a royalty will be charged.

Fuller details of the plan may be learned by corresponding with the Secretary of the Association, Station N, Baltimore, Maryland.

The plan chosen is not a new one, but is one which has been followed with much success in the case of a little play based upon Mrs. Gaskell's "Cranford." The author of this play presented the copy-right to a missionary society in one of the eastern states, and the work of the society has profited much by the receipts from royalties, and in other ways.

In making plans for holiday celebrations, for next Commencement, for autumn festivals, or for Richards Day in 1916, bear the pageant

in mind. If you learn of any association that wishes to present an unusual and distinctively American play, tell them about "America's Gifts" and suggest that it may suit their needs. Suggestions from our readers that in any way will help on this laudable enterprise will be welcome.

In any case, be sure to read the pageant; first, because you will enjoy it, and second, because it brings together so much interesting information regarding America's contribution to the world's store of the things with which Home Economics is especially concerned.

Three Contests. We have called attention in another column to three prize contests that seemed of interest to teachers and to parents. Of these the one that on the surface seems most nearly identified with Home Economics is perhaps after all the least fundamental.

The peace contest should appeal to the teacher who realizes the influence of the home and the school upon public opinion. If a permanent peace is ever secured it will be by that long and slow process of education that is often so discouraging, but that in the end gives lasting results.

We need not sing "I did not raise my boy to be a soldier," but we must present true and noble ideals of peace. If "poets have made more wars than kings" we must have great poets who inspire us for peace.

Dr. Wyeth, a surgeon and soldier, in "With Sabre and Scalpel," gives this incident that illustrates well the influence of the home.

A boy playmate lost his temper at something that happened between us, and in anger gave me a slap which I did not resent. At this juncture I heard a voice from a nearby window, and, turning, I saw my mother leaning out, her eyes flashing so that I could almost see the sparks flying, and her cheeks as red as fire. In a tone about which there could be no misinterpretation, even by one who instinctively preferred peace to war, she asked me if the boy struck me in anger; and when I told her he had, she blazed up and said, "And you didn't hit him back?" My response was that father had told me it was wrong to fight, and that when another boy gave way to anger just to tell him it was wrong and not fight back. At this the blue bonnet of Clan-Allan (the mother's maiden name) went "over the border" and she fairly screamed: "I don't care what your father told you; if you don't whip that boy this minute I'll whip you!" And she looked on, and was satisfied when it was over. I date my career from that eventful day; for I had come to the parting of the ways.

Of especial interest in the "Thrift" contest is the request for a course that will teach thrift.

When several years ago a committee of the American Medical Association were surveying the teaching of hygiene in the public schools they found it taught most efficiently in Home Economics work. Children may learn theoretically the necessity for clean hands, but still more effective is the sending of the children to wash their hands before they are allowed to cook.

A mother who, giving one day some directions to her child, found an inattentive listener and said with a little impatience, "Mary, I believe you think I am talking just for the sake of talking," met the unexpected reply, "Why yes, Mamma I thought you were." So much of our teaching must be of this precept variety that we should welcome the opportunity to train children through practice.

The careful utilization of all materials—even in the simplest ways, thin parings, the use of every particle of material from the cooking dish, letting the class know that yolks or whites of eggs left over from some cooking process will be utilized by another class, cutting the garment to use the cloth to the best advantage, care of materials and clothing actually carried out in the class room as well as at home, all these and a thousand more suggest themselves.

Surely some Home Economics teacher should make that "best" outline!

COMMENT AND DISCUSSION

The JOURNAL invites its readers to become contributors, and to send brief paragraphs of comment and discussion on articles that appear. The expression of a difference of opinion, questions in regard to the accuracy of work, additional data, all are welcome.

HOUSEKEEPERS' DEPARTMENT

THE YOUNG WOMEN'S CHRISTIAN ASSOCIATION COMMISSION ON HOUSEHOLD EMPLOYMENT

The first report of the Young Women's Christian Association Commission on Household Employment¹ is concerned with an attempt to discover and analyze the causes which underlie the difficulties in household employment. In making a survey of literature on the subject the commission finds that the most hopeful element is an increasing number of men and women who are viewing the problem in its larger sociological and economic aspects. The discouraging feature is that reports and discussions echo the same grievances that were voiced twenty years ago.

The relation between employer and employee is described as one of mutual suspicion and distrust, mutual prejudice and misunderstanding. The employer complains of inefficiency, high wages with no commensurate skill, frequent changes, exorbitant demands, lack of interest, and ingratitude. The employee complains of long hours, unkind treatment, unhappy living conditions. The experiments at adjustment, begun with enthusiasm, have ended in partial or complete failure. Training schools, established for domestic servants have dwindled away or evolved into schools for training domestic science teachers. The Household Aid Company stands out conspicuously as an earnest attempt to supply efficient service by the day or hour. The Aids after their training continued to live in the home fitted up by the company, and were sent out in response to calls for day or hour service received by the company. The project received neither the moral nor financial support that had been expected, and after two years the house was closed.

In the Young Women's Christian Associations there has been more or less effort at adjustments between employers and employees through employment bureaus, training classes, and general education. In certain localities there has been considerable success in enlarging the social life of household employment through Maids' Clubs, but these activities have affected the conditions in the occupation itself very slightly.

¹ First Report of the Commission on Household Employment. Publication Dept., National Board of Y. W. C. A., 600 Lexington Ave., New York City, 1915, pp. 34. \$0.15.

The boycott of household employment is to be deplored the more because girls who have chosen other employment are so frequently without work. During the past winter when the situation among the unemployed was at its worst in New York City, the head of the city employment bureau said he could place 3000 young women in domestic employment if he could get them.

Many indirect causes for this situation were of little interest to the Commission since they suggested no possibilities of satisfactory adjustment. The one obvious thing to be done was to investigate through the persons who are causing the boycott, namely, the wage-earning young women. Through the coöperation of the Young Women's Christian Association clubs, the opinions of 299 self-supporting young women were secured: 112 in household work, 137 in factories, 15 in department stores, 35 in offices.

The answers in regard to household employment included few new ideas but especial emphasis was placed on the necessity and possibility of regular and shorter hours, and a place to entertain friends, and frequent reference was made to the lack of "humane treatment."

The summary of the report is as follows:

I. Household employment carries within itself no objectionable features, is healthful, and pays well.

II. Household employment is performed under conditions which prevent self-direction and self-development of personal life.

III. These conditions are:

1. Servile treatment by employers and public.
2. Long and irregular hours.

The first condition, servile treatment, may be spoken of as the minor condition; the second condition, long and irregular hours, as the major, because the first is dependent upon the second. Servile treatment and unjust social discrimination find abundant opportunity to express themselves where one person's life is tied to the will of another person.

A factory worker sells her *labor* for nine hours a day; during fifteen hours she lives a self-directed life. Her evenings and Sundays may be filled with work, her own laundry and mending, care of her mother, sisters and brothers, study at night school and the Association, or it may be filled with recreation. Be that as it may, that time is hers, not the employer's.

A household worker sells *herself* for twenty-four hours a day, for seven days in a week, and as part of her remuneration is granted the *privi-*

lege of an hour here, an hour there, a half day a week, perhaps, if it does not inconvenience the employer. Granted that her work is light, that half the time she does nothing; still her life, her person, is at the disposal of the employer. As long as a person must have all her living conditions, her social life, her entertaining, her educational and spiritual development at the sufferance of her employer, there will be abundant occasion for servile treatment and the social stigma.

Do not let us confuse the terms, "life" and "labor." It may be that in the highest scale of professional service a man's work may become his life. In the industrial world there is still a sharp distinction. A young girl's life consists of her family, her companions, her recreation, her ambition to be somebody, to improve herself, to find herself a place in social groups—the church, the club, the union, the neighborhood. An ambitious self-respecting young woman is willing, is eager, to sell her labor; but never her life. Make it possible for the household worker to sell her labor for more or less definite pieces of time, so that she may have equal opportunity for self-direction and self-development with the office, store and factory worker, and household employment will be able to compete successfully with the store and factory. When this is accomplished the so-called "servant problem" will have disappeared. Ambitious, intelligent young women will be re-attracted to household work; with the competition for positions will come the opportunity to demand skill and training. Above all, home life will no longer be at the mercy of housework.

The burden of placing household work on this new basis rests with the employer. What the first step might well be is suggested by the plan for hours and living conditions proposed by the workers, themselves.

The task of creating out of household work an occupation which will bring satisfaction to employer and employee alike is not a small nor an easy one; neither is it one which can be brushed aside to be taken up at some future time. The large number of persons involved and the far-reaching consequences of the present chaotic condition of affairs mark this as one of the most pressing problems American women have ever been called upon to solve. The Young Women's Christian Association exists for the benefit of all women, and numbers in its membership both employers and employees. It is only natural that such an organization should assume some share in the responsibility of solving the problem.

To repeat the statement with which we began this report, an adjustment of the difficulties in household employment must proceed from a correct analysis of the causes producing those difficulties. If the method employed by the Commission in its search for determining causes is accepted by the convention as trustworthy, the next step forward will be to enlist the interest of employers in a further study, and to secure their coöperation in practical experiments.

It is therefore recommended:

1. That the Commission on Household Employment be continued.
2. That local Young Women's Christian Associations coöperate with the Commission in securing the active interest of employers—(a) in a study of household employment from the point of view of wage-earners, (b) in practical experiments based on such study.

COMMITTEE ON HOME ECONOMICS, INTERNATIONAL CHILD WELFARE LEAGUE¹

During the past year the Committee on Home Economics of the International Child Welfare League has been carrying on an experiment in social economics, which has proved full of interest to all concerned.

The Committee was organized in March, 1914 for the purpose of bringing together young women with some knowledge of household activities and persons who might wish to employ them on the basis of hourly work.

The work has been carried on as a part of the regular work of the International Child Welfare League. Patrons and girls when they register with the Committee, become members of the League. Only girls of good education and training are placed by the Committee. The best workers have been drawn from the high school girls, or those of equally good calibre. The Committee recognizes the highly experimental character of the work and has been feeling its way. There has been no difficulty in finding plenty of capable young women who were delighted with the idea of living at home and working by the hour, half day or day. It remains to be proved, however, whether there are enough housekeepers in New York who wish to employ the young women on the list of the Committee at the required price. The charge is a minimum of \$0.25 an hour and some patrons think this is too high. But the Committee believes that there is a clearly marked tendency toward more specialized and better paid work in the household, as well as out of it; and with the conviction that the experiment is not wholly premature, the Committee is going on with its efforts to bring together two groups of women that greatly need each other.

¹ Brief report of the chairman, Mrs. William G. Shailer, presented to the American Home Economics Association at their Eighth Annual Meeting, Seattle, 1915.

THE GENERAL FEDERATION AND THE DEPARTMENT
OF AGRICULTURE

In order that it might inform itself more fully as to the work which the government, and particularly the Department of Agriculture, is doing for the housekeeper, the General Federation of Women's Clubs appointed a committee to look into the matter. The committee visited Washington twice, each visit covering a number of days spent in examining in detail the Department of Agriculture, its organization, and such portions of the work as seemed to them of interest to housekeepers.

The number of Department projects, which were important from this standpoint, was considerable and clearly indicated that women's interests were receiving much attention even if this was not always apparent from the designation which the work bore in reports of the Department activities. It also found that there existed in the States Relations Service (formerly called "Office of Experiment Stations"), an enterprise concerned exclusively with problems in the home, namely, the Office of Home Economics (an outgrowth of the Nutrition Investigations which have been carried on by the Department for a number of years).

Such matters as this are discussed in the committee's report of the Home Economics work of the Department of Agriculture as pointed out by Helen Louise Johnson,¹ chairman of the committee, in an article recently published, which includes also an historical account of the origin and development of this work in the Department of Agriculture, and similar data. The report submitted by the committee to the General Federation contains the following recommendations:

First: That the Home Economics Department of the Federation for the remainder of this administration to June, 1916, devote a considerable part of its work to the dissemination of this information and to the establishment of the connection between the work of the Department of Agriculture, Home Economics work, and the homes of the people.

Second: That a study of state conditions as relating to food and agricultural matters be recommended in each state that the women of the Federation may learn:

¹ Home Economics and the Department of Agriculture. By Helen Louise Johnson, *Gen. Fed. Women's Clubs Mag.*, July, 1915, pp. 22, 23.

- a.* The provisions of the Federal Pure Food and Drug Act of 1906.
- b.* The provisions of their own state food laws.
- c.* By whom these laws are promulgated in the state.
- d.* By whom these laws are enforced in the state.
- e.* What municipalities in the state have milk and meat inspection.
- f.* What municipalities have ordinances governing inspection of food supplies.

With due stress upon the need of this, in order that we may assist in obtaining, and desist from delaying, greater uniformity of law throughout the country.

Third: That the women of the Federation lend their influence to the establishing of competent and reliable state and municipal inspection of abattoirs and meats which cannot be reached through the federal law, and thus supplement the federal inspection in establishing safeguards for the protection of the rights and health of all consumers of meats. And further that the women of the Federation assist in the attainment of this object by insisting that the dealers supply them only with meats and products that bear the marks of a competent and reliable city or state inspection, or the marks of the federal inspection, and that the buyers make it their practice to look for the mark of inspection when purchasing meats.

Fourth: That we should study the work of the individual State Agricultural Colleges, with which the Department of Agriculture is now co-operating in a large way, with reference to all their plans for extension work in Home Economics, whether under the Smith-Lever Act or otherwise, taking into account the great variety of conditions affecting such work and seeking to find ways in which we can aid them constructively in developing a proper system of extension work to meet the actual conditions of farm homes in their respective states.

"UNITED STATES INSPECTED AND PASSED"

Consumers may be assured that at the time this legend is affixed to meat or meat food product the articles are sound, healthful, wholesome, and contain no dye, chemical, preservative, or ingredient which renders them unwholesome, and that they are from healthy animals which have received both ante-mortem and post-mortem inspection and have been reinspected by qualified inspectors and handled in a sanitary manner as prescribed in the regulations. The subsequent handling of meats after they have been distributed to dealers and consumers beyond the jurisdiction of the federal law and regulations may not be consistent with proper sanitation and preservation, there-

fore it is to be understood that the legend can not be regarded as protecting against such abuses.

The extent of such inspection so far as meat is concerned is shown by the following official statement of government meat inspection during eight years (1907-1914).

Animals inspected at slaughter.....	over 434 million
Carcasses condemned.....	over 1½ million
Parts of carcasses condemned.....	over 5½ million
Condemned on reinspection.....	over 179 million lbs.
Establishments under inspection.....	819
Cities and towns in which located.....	232
Veterinary inspectors and assistants.....	2,378

In the year ending June 30, 1915, 58,000,000 meat animals were killed in establishments where federal inspection is maintained (only 50 to 60 per cent of all such establishments). Of these more than 1½ per cent were condemned in whole or in part. Of imported meat or meat products, 245,000,000 pounds were inspected, of which 2,000,000 pounds were condemned or refused entry.

The annual appropriation for the Federal Meat Inspection Service is now about \$3,375,000.

FOR TEN CENTS

The relative energy value obtained for ten cents when spent for different common food materials, at certain assumed prices, is shown by the lines below.¹

Wheat Flour, 5c. per lb.	_____
Oatmeal, 6c. per lb.	_____
Wheat Bread, 5c. per lb.	_____
Dried Beans, 7c. per lb.	_____
Macaroni, 10c. per lb.	_____
Rice, 10c. per lb.	_____
Potatoes, 2c. per lb.	_____
Corned Beef, 12c. per lb.	_____
Butter, 35c. per lb.	_____
Prunes, 12c. per lb.	_____
Cheddar cheese, 24c. per lb.	_____
Milk, 8c. per qt.	_____
Steak, 24c. per lb.	_____
Eggs, 35c. per dozen	_____

It must be remembered that this is not a comparison of food values, nor even of energy values, but simply of the amount of energy obtained for a certain sum.

¹ This comparison is based essentially on the values given in the United States Department of Agriculture Bulletin 28.

ENAMELS OF COOKING UTENSILS

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The enamels which are applied to the enameled ware articles for domestic use are essentially a glass which has been rendered opaque by the addition of some insoluble substance, usually calcium phosphate in the form of bone ash or oxid of tin, which is held in suspension in the enamel. Lead oxid has been used to some extent for this purpose, but this practice is now being rapidly discontinued. The color of the enamels is produced by the further addition of the desired pigment, which is generally one of the metallic oxids.

The chief requirements of enamels for cooking utensils are that they shall be able to withstand sudden changes of temperature without cracking and to resist the solvent action of solutions of acids and alkalis. The first property depends to a great extent upon the care observed in applying, firing and cooling the enamel. The second property depends chiefly upon the composition of the glass basis of the enamel, although it is influenced somewhat by the addition of the pigments and the materials which render it opaque, and it may be mentioned here that the colored enamels are not in general considered to be quite so durable as the white enamels.

Like all glasses, enamels are readily attacked by strong alkalis and to some extent by even dilute alkaline solutions. The surface of the enamel becomes dull and rough, owing to the solvent action of these agents. It is obvious then that enameled ware utensils should not be used for heating or containing solutions of alkalis. The continued use of very strong alkalis (lye, caustic soda or cleaning powders containing free alkali) for cleaning such utensils should also be avoided on account of their tendency to wear away the enamel, particularly when much friction is applied. Solutions of salts like phosphates and sulphates which form insoluble calcium salts also effect a slight solvent action upon the enamel due to the extraction of calcium. When exposed for a long time to boiling water the enamel may be attacked if the water contains these salts, as is evidenced by the dull appearance of the enameled lining of some kettles which have been long in use. This action, however, like that of dilute acids, such as vinegar or fruit acids, is not an important factor influ-

encing the wearing quality of the better grades of enameled ware which do not contain lead compounds.

In the case of the cheaper grades or imperfect articles sold as "seconds," where the enamel has become chipped off or the covering is poor, so that the iron base is exposed, the action of these agents upon the iron is much more rapid than upon the glaze. The iron may become dissolved away under the enamel, causing it to become loosened and to chip off more easily.

The addition of lead compounds to the enamel is regarded by some manufacturers as desirable in order to produce an easily fusible product, but such enamels, like lead glasses in general, have a very low resistance to the action of chemicals and are quite readily attacked even by substances which have no action whatever upon ordinary glasses which contain no lead. The use of lead compounds for these purposes and of lead oxid for producing an opaque appearance fortunately is fast being discontinued in the manufacture of enamel ware and cooking utensils on account of the possible danger of lead poisoning, since the lead in this form is very easily dissolved by dilute acids, like vinegar and acids of fruit juices.

If an egg is beaten up and allowed to stand for some time in a vessel coated with an enamel containing lead oxid, the enamel is soon discolored through the formation of lead sulphid from the lead oxid of the enamel and the small amount of volatile sulphur compound formed by cleavage from the egg protein. This might easily serve as a household test for the presence of lead in enamel ware utensils, and any utensil which on being tested in this manner showed evidence of the presence of lead in the enamel should be rejected for cooking purposes.

The question has sometimes arisen as to whether or not there is any possible danger from small particles of enamel which might become detached and, finding their way into the body with the food, cause injury to the intestinal walls. There appears to be no case on record where it is known that any serious injury has been done by such particles. The theory that appendicitis is caused by enamel chips seems to have no basis of fact.

The Superior Council of Hygiene for France recently recommended that legislation be enacted forbidding the use of enamel ware meat choppers for the production of Hamburg steak. It was observed that the enamel on such machines was in many instances almost entirely

worn off, and the assumption was made that the small particles of enamel which had become broken off were quite likely to be mixed with the meat. To avoid all possible danger from the consumption of such particles this action was taken.

While it is possible that minute particles of the enamel of cooking utensils may become broken off and find their way into the food, they probably do not do so in any great numbers at a time, and in the light of experiments carried out by Exner in which he apparently showed that sharp particles might be swallowed and passed through the intestinal tract without producing any harm, it does not appear that there is any more serious danger from this source than in the use of ordinary glass utensils. The enamel flakes from a dish which has been in long use, are frequently found to be crumbly and similar to egg shell in appearance. Such pieces, since they loosen easily, would perhaps be more likely to find their way into food than the more glassy chips from new vessels. However, no one wishes grit in his food and every precaution should be taken to prevent chips of glass, china, or enamel from finding their way into it. While the presumption is that small pieces would not cause harm, it is possible that they might.

In the manufacture of some kinds of enamel ware, antimony salts are used to impart the desired color to the enamel. Recently there has been some question as to possible danger of antimony salts being dissolved by the foods cooked in enamel ware utensils. Some preliminary experiments, made in the Department of Home Economics of the University of Illinois, apparently showed that small amounts of antimony compounds were extracted when dilute solutions of organic acids were cooked in some of the cheaper grades of enameled ware. Organic acids of importance in cookery are acetic acid in vinegar, citric acid in lemons, lactic acid in sour milk, and malic acid in apples. There is need of further experiments before definite conclusions can be drawn as to the actual amounts of antimony salts which would be extracted by foods during the ordinary cooking processes. It is well to bear in mind in this connection that the manufacturers of some of the better grades of enamel ware state, on the labels attached to their product, that no antimony compounds are used in the preparation of the enamel. It is, therefore, possible, if one desires to do so, to secure enamel ware utensils which are free from antimony compounds.

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BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS if the Journal price is listed.

The Housekeeper's Handbook of Cleaning. By Sarah J. MacLeod. New York: Harper and Brothers, 1915, pp. 259. \$1. By mail of the JOURNAL, \$1.08.

This volume is among the first text-books published on the science of cleaning the various metals, woods and general furnishings of the home. The first fourteen chapters might be termed "Housewifery" based on expert chemical knowledge. The problems of the housewife are met and squarely dealt with, so that this simple arrangement of scientific facts appeals directly to housekeepers. Because there is a lack of compiled knowledge on this subject this book should be in much demand by teachers and students.

The last ten chapters deal with the question of the laundry, first taking up the equipment, making and use of reagents, removal of stains, etc. The practical side of washing and ironing is followed with a chapter on Dry Cleaning and General Care of Clothing.

An excellent inventory of equipment for a cleaning-closet, giving the prices of articles mentioned, closes this helpful handbook.

The volume is neat in appearance with clear-cut illustrations and the type is good.

How to Buy Furniture for the Home. By Forrest Loman Oilar, Indianapolis, Ind., pp. 180. \$1.50.

This little book is written from a different stand-point from that of most books on house furnishing, and will be helpful to many teachers who know more about the artistic than the commercial side of the subject.

Advice is given on where to buy and on the dangers of the installment plan. A chapter is given to each room of the house, to woods, leathers, period furniture, carpets, rugs, etc.

The Art of Home Candy Making. Home Candy Makers, Canton, O., 1913, 3. rev. ed., pp. 110, figs. 24. \$2.

Detailed directions are given for making candy at home, in most cases the sorts usually thought of as commercial candies.

Household Budget Blanks: Shelter Budget, Food Budget, Operating Expenses Clothing, Higher Life and Personal Life Budget. Philadelphia Home Economics Association, Care of Miss Alice Johnson, Department of Education, City Hall, Philadelphia. \$0.15.

This is a set of a dozen printed sheets giving forms for entering the detailed facts of family expenditure, which were drawn up by Miss Emma A. Winslow and used for collecting schedules of expenditures in a course on the budget given before the Philadelphia Association last spring. Persons interested in budget study or teaching, or in making an examination of their own finances, will do well to secure a copy.

Air, Water, and Food, from a Sanitary Standpoint. By ALPHEUS G. WOODMAN AND JOHN F. NORTON. Fourth edition, revised and rewritten. New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Limited, 1914, pp. 248, illus. 17.

Since the third edition of this work one of the authors, Mrs. Ellen H. Richards, has died and a change of authorship is noted in the fourth edition. The whole book has been carefully revised and the character of the treatment of certain parts has been radically changed to make it of more use in colleges and technical schools.

Since the last edition in 1909 "there have been distinct advances in analytical methods, and a changed point of view has brought about a somewhat different interpretation of results. This is particularly true with regard to the relation of air to health and comfort. . . . All of the discussion on air and water has been completely rewritten, as has the section on milk, the older methods revised, and numerous additions, to correspond to the latest practice, made. As in previous editions, these discussions are intended to be essentially elementary rather than exhaustive."

The Young Woman Worker. By Mary A. Laselle. Boston and Chicago: The Pilgrim Press, 1914, pp. 189. \$1.

Seldom does one find such a helpful, straightforward, sane little book as *The Young Woman Worker* when one wishes to recommend a self-help book to a young girl or her mother. Such a book is of value to all women in its suggestions for success in life. The chapter on Dress is of particular interest to Home Economics workers. A number of actual budgets kept by young workers of the annual amounts spent for dress, are valuable for a comparative study. These show an expenditure for dress of from 10 to 18 per cent of the income.

Medical Inspection of Schools. By LUTHER HALSEY GULICK, M.D., Director of Physical Training, New York Public Schools and LEONARD P. AYRES, General Superintendent of Schools of Porto Rico, 1906-1908. New York: Survey Associates, 1913, pp. 224. \$1.50. By mail of the Journal, \$1.62.

When *Medical Inspection of Schools* was first issued in 1908, it represented a pioneer volume in the American literature of the subject. Today, there are many books dealing with various phases of medical inspection but the revised edition of Gulick and Ayres still maintains its high place in the scale of practical, reliable, honest, and non-dogmatic books dealing with the various problems and difficulties of medical inspection.

The text has been considerably revised and much of it has been rewritten. The book has been condensed without the sacrifice of any valuable material. The new volume is rich in illustrations and stronger in tabulations than was the first edition. The presentation of administrative forms evidences better selection for they are more suggestive than those utilized in the previous edition.

The chapter on Dental Inspection is unusually full, possibly disproportionately so, since fewer pages are devoted to the methods of making medical inspection effective.

The chapter dealing with the legal provisions for medical inspection has been rearranged and presents a wealth of material for the organization of such work in the states and municipalities.

As a whole, the revised edition merits appreciative criticism. It has achieved a noteworthy position in the literature of the subject and deserves careful study by educators, physicians, parents, social workers and all other students who are interested in the conservation of our school children through the potential, protective and corrective advantages of medical inspection of schools.

Democracy's High School. By William D. Lewis. New York: Houghton Mifflin Company, 1914, pp. 129.

In this book Principal Lewis of the William Penn High School in Philadelphia has presented many valuable ideas for Home Economics workers. He suggests the correlation of cooking with the family budgets for various incomes. "The household budgets should be carefully analyzed and the problems of buying should be studied at first hand in the stores and markets. . . . Such training would have a direct value in raising the economic and moral status of the home." In connection with the house planning work "our boys and girls could with great interest and profit study the housing conditions in the poorer parts of the city."

The valuable opportunity which the school cafeteria or lunch room offers as a social gathering place at noon is emphasized as a means of preventing or at least lessening the danger of social evils of various kinds in the high school. If time and room could be afforded for taking the lunch leisurely in comfortable surroundings; if the holding of class meetings, committee meetings, etc., could be encouraged there during the noon hour rather than at High School Club rooms in the city much danger could be averted.

Principal Lewis believes that "The school luncheon, run on a coöperative plan, will provide good, nutritious food at a moderate price, and will refuse to furnish anything deleterious to the health of the growing girl. Thus it will tend to establish correct habits of diet and serve as an example of the possibility of securing good food at moderate prices. But the school will go much further than the luncheon: it will, as a second essential of its course, aim to give every girl a thorough and systematic training to fit her for efficiency in the home."

All teachers who are just organizing or reorganizing high school courses should read this book.

BOOKS RECEIVED

- Five Cent Meals.* By Florence Nesbitt. Chicago: American School of Home Economics, 1915, pp. 37. (Pamphlet) \$0.10, or in lots of 100 at \$0.05 each.
- Guide Book to Childhood.* By William Byron Forbush. Philadelphia: American Institute of Child Life, 1915, pp. 557. \$2.50. By mail of the Journal, \$2.65.
- A Guide to Laundry Work.* By Mary D. Chambers. Boston: Boston Cooking School Magazine Co., 1915, pp. 104. \$0.75. By mail of the Journal, \$0.80.
- Home Making and Home Keeping.* By Grace J. Ferguson. Department of Education, San Juan, Porto Rico, 1915, pp. 278.
- Low Cost Cooking.* By Florence Nesbitt. Chicago: American School of Home Economics, 1915, pp. 127. \$0.50. By mail of the Journal, \$0.56. (Lots of 20 or more at \$0.25 each.)
- Milk and Milk Products in the Home.* By John Michels. Farmingdale, New York, 1915, pp. 100. \$0.75. By mail of the Journal, \$0.81.
- The Nutrition of a Household.* By Edwin Tenney Brewster and Lilian Brewster. Boston: Houghton, Mifflin and Company, 1915, pp. 208. \$1.00. By mail of the Journal, \$1.08.
- Principles of Domestic Engineering.* By Mary Pattison (Mrs. Frank A.) Colonia, N. J. 1915, pp. 310. \$2.00. By mail of the Journal, \$2.14.
- Student's Manual in Household Arts: Foods and Cookery.* By Martha L. Metcalf. Indianapolis: Industrial Education Company, 1915, pp. 299. \$1.10. By mail of the Journal, \$1.24.
- Wage Worth of School Training: an Analytical Study of 600 Women-Workers in Textile Factories.* By Anna Charlotte Hedges. New York: Teachers College, Columbia University, 1915, pp. 173. \$2.00. By mail of the Journal, \$2.10.
- Candy Making in the Home.* By Christine Terhune Herrick. New York: Rand McNally and Company, 1914, pp. 130. \$0.50. By mail of the Journal, \$0.55.

NEWS FROM THE FIELD

Council Meeting. A meeting of the Council of the American Home Economics Association was held in New York City on October 23, at the Cosmopolitan Club, whose hospitality was extended through the courtesy of Miss Isabel Lord of Pratt Institute. Fifteen members were present, the president, Miss Van Rensselaer, presiding.

Reports were read from the different sections, vacancies on the Council filled, and new committees were appointed.

Mrs. Abel, in recognition of her invaluable services as editor of the JOURNAL was made an honorary member of the Association.

The most important business was the presentation by the new treasurer of detailed plans for the reorganization of the finances of the Association. The business of the Association including the handling of the funds of the JOURNAL has become so large that it has outgrown our former methods.

A full report of the meeting will be found in the next bulletin.

The University of Illinois. The University of Illinois is sending out a finely equipped demonstration car devoted entirely to work in Home Economics.

Miss Eva Benefiel has been made county adviser for Kankakee County, Ill. She is probably the first woman to hold such a position in a northern state.

Dr. Nellie E. Goldthwaite, formerly assistant professor in Home Economics at the University of Illinois, has accepted the position of Dean of Women and Head of the Home Economics Department at the State Agricultural College, Durham, N. H. Miss Ruth Wheeler is conducting Miss Goldthwaite's classes at Illinois.

Miss Laura Hope of Boston, formerly assistant in the University of Wisconsin is developing the work in dress design. Miss Hope is a graduate of the Providence School of Design and has exhibited her work in Boston and New York.

Massachusetts Agricultural College. Miss Harriet J. Hopkins is establishing the department of Home Economics in the University of Oklahoma, Norman, Oklahoma. Miss Marie Sayles holds the position that Miss Hopkins formerly held, that of instructor in Home Economics in the Extension Service at Massachusetts Agricultural College, Amherst. Last

year Miss Sayles had work in the Lewiston Normal, Lewiston, Idaho, training teachers especially for rural work along Home Economics lines. She is a Teachers College graduate.

The Stout Institute. The Home Economics department of The Stout Institute, Menomonie, Wisconsin, began the year with an enrollment of over 400, the largest in the history of the institution. Because of this, faculty and students at present are working under difficulties, but they hope to be in their new building before the close of the year. This building, when finished, will be one of the largest and most complete of its kind in the country. It is to be four stories above a ground floor basement and is 228 feet long by 126 feet wide.

The basement will contain locker space for 500 students, cafeteria, laundry recitation rooms and refrigeration rooms in addition to commodious store rooms and toilet accommodations.

The first floor is for library, offices, exhibit and recitation rooms. The second floor is devoted to domestic art, with seven well equipped sewing rooms each with fitting and store room in connection. The domestic science laboratories, five in number, with recitation rooms, demonstration lecture room, pantries and four small kitchens with adjoining rooms for work with small groups, occupy the third floor. Biology and chemistry laboratories, recitation rooms, amphitheater to seat 250 and drawing rooms are located on the upper floor. Offices and rest rooms are on each floor.

In connection with the work of house management this year, a furnished house has been utilized for practice work in this field. A group of eight students, under the direction of an instructor, live there for a period of two weeks, prepare their meals and assume the responsibility of buying, cleaning, accounting, and performing other household duties.

American School Peace League Contest. Because of our belief that only through education in the home and the school can there be secured that permanent peace that will forever prevent the devastating effect of war upon the homes of all nations, we are glad to call the attention of Home Economics students to the Peace Prize Contest, under the auspices of The American School Peace League. This is open to pupils of all countries.

Two sets of prizes, to be known as the Seabury Prizes, are offered for the best essays on one of the following subjects:

1. The Opportunity and Duty of the Schools in the International Peace Movement. Open to seniors in the normal schools.
2. The Influence of the United States in Advancing the Cause of International Peace. Open to seniors in the secondary schools.

Three prizes of seventy-five, fifty and twenty-five dollars will be given for the best essays in both sets.

The contest closes March 1, 1916 and the award of prizes will be made at the Annual Meeting of the League in July, 1916. The conditions of the contest may be learned by writing to Mrs. Fannie Fern Andrews, Secretary American School Peace League, 405 Marlborough St., Boston, Mass.

Home Economics Prizes. A set of prizes is offered by the *Ladies Home Journal* to Home Economics students for the best article of 300 words on any of the following subjects:

1. "A happier method of accomplishing an old household task."
2. "A household superstition from which I've gained my freedom."
3. "A discovery I've made in food preparation."
4. "My suggestions for improving domestic science instruction."

The contest closes on January 1, 1916. If you are interested write to Miss Anna Merritt East the "New Housekeeping" editor.

Miss East has lately assumed the editorship of this department, coming from the Bureau of Home Economics of the New York Edison Company.

Those who were at the annual meeting of the A. H. E. A. in Cleveland will remember that Miss East represented there the work in the Philippine Islands where for two years she had been in charge of the training of Home Economics teachers in the Philippine Normal School, Manila.

An interesting part of her work was the training of girls in the cooking and serving of corn foods for the Philippine exposition; part of the campaign conducted by the Bureau of Education toward the changing of a people's food from entire dependence on rice to partial dependence on corn that meant in three years a saving of two million dollars to the Filipino people. Miss East is a graduate of the University of Nebraska where later she did extension teaching. She has also taken graduate work at Columbia.

Thrift. Two essay contests on Thrift were proposed by S. W. Straus of New York, President of the American Society for Thrift, to the National Education Association at Oakland.

One contest carrying prizes varying from \$10 to \$100 is for school children, and, it is hoped, will be nation-wide. The essays must be finished by December 1, and will be presented through the county or city superintendents to the state superintendents of education.

The other contest is open to adults, and the essays must be in the possession of the secretary of the National Education Association, Durand W. Springer, Ann Arbor, Mich., by March 1, 1916. Contestants must notify the secretary of their intentions by December 1. This contest carries a first prize of \$750.

Its special interest is in the subject assigned: "Thrift—with an Outline of a Method by which the Principles of Thrift may be Taught in our Public Schools."

The New Washington Market. The opening celebration of the New Washington Market in New York, which is known wherever food is produced as a place to buy and sell, was held October 25. The new market contains every known modern device that makes for efficiency and sanitation.

The market dates back to 1656, when the trading was done on the parade ground back of Fort Amsterdam, now the site of the Custom House. In 1658 the Strand Market, situated at Pearl, Moore and Whitehall Streets, was organized. Supplies were obtained by canoe from Long Island, then known as Nassau Island. In 1756 the general market of the city was moved to Maiden Lane, in the middle of Broadway, and in 1771 the famous Fly and Bear Markets were established at a place adjacent to the present site of Washington Market. The present site was recommended in 1805. In 1812 the butcher boys in the market formed themselves into a brigade for service in the war against England. On their banner was the following slogan: "Free trade and butchers' rights from Brooklyn's fields to Harlem's heights."

The Iowa Federation of Women's Clubs, Home Economics Committee, recommends that every club in the state make some phase of Home Economics a part of its program. They are urging the organization of girls' garden and canning clubs.

Prof. E. C. Bishop of Ames is in charge of this juvenile Home Economics work. He is the agent of the federal government and will accompany the winning contestants to Washington.

The "Kitchen on Wheels" is being fitted up by Iowa State College at the instigation of the committee, and will soon be ready to send out.

The Santa Barbara Home Economics Association held its first meeting of the fall term on September 15. Mrs. F. M. Rhodes, the newly elected President gave a welcome to all the students. Miss Nell A. Miller, Head of the Department of Home Economics spoke of the work of the year and of the opportunities it would give the students to learn something of the large field of Home Economics which cannot be reached through the class room. President Ednah Rich brought greetings from the international meeting in Oakland and urged the Branch to cooperate in the work on Budgets to which the American Home Economics Association has pledged itself this year. President Rich also brought a message to the students

from the Biennial Meeting of the Collegiate Alumnae. A meeting was announced for September 22, when Miss Bonnie Scholes of the Science Department will give a report on the Home Economics Exhibits at the Panama Exposition.

The Iowa Home Economics Association announced the following program for their seventh annual meeting held this year in Des Moines.

Thursday, November 4, 2 p.m.

Home Economics in the High School, Emma Conley, State Supervisor of Home Economics, Wisconsin.

High School Extension Work, Mrs. F. F. Faville, Chairman of Home Economics Committee, Iowa Federation of Women's Clubs.

Standardization of Home Economics Courses, W. A. Jessup, Department of Education, Iowa State University.

The Teacher, and Community Social Well-Being, Geo. H. Von Tungeln, Department of Social Science, Iowa State College.

Friday, November 5, 9 a.m.

Recent Contributions to the Foundations of Dietetics, Ruth Wheeler, Department of Research, University of Illinois.

Textiles, Nellie Crooks, Director of Home Economics, Milwaukee-Downer College.

Costume Design, Ethel Erwin, Department of Household Arts, Stout Institute, Menomonie, Wisconsin.

House Furnishing, Ethelwyn Miller, Chicago University.

The program was chiefly the outcome of requests from the Home Economics teachers of Iowa.

A cordial invitation is extended not only to teachers but to all interested in Home Economics to join the Association. Annual dues may be paid to Louise Weaver, 933 Thirty-first St., Des Moines, Iowa.

The Home Economics Association of Washington, D. C. began this year's work by a meeting on October 5. Mrs. Henrietta Calvin of the Division of Home Economics, Bureau of Education gave a talk on New Phases of Home Economics Teaching as Observed in Forty Schools.

Michigan Home Economics Association. The sixth annual meeting of the Michigan Home Economics Association was held on Thursday, October 28, at Saginaw, Michigan, as a section of the State Teachers' Association. Prof. Abby L. Marlatt, of the University of Wisconsin, made an address

"full of inspiration and of definite information" on The Inter-relation of Secondary Schools, Normal Schools and Colleges, in Home Economics.

Resolutions with regard to a standard course of study for the schools of Michigan were read and discussed, and a committee was appointed to obtain information as to the possibilities of such a course.

The following officers were elected: President, Mrs. Martha H. French, State Normal College, Ypsilanti; First Vice President, Miss Grace McAdam, Detroit; Second Vice President, Miss Ruby McCormick Smith, Saginaw; Secretary-Treasurer, Mrs. L. L. Peppard, Agricultural College, East Lansing; Councilor, Miss Lenna Cooper, Battle Creek Sanitarium; additional members of the Executive Committee, Mrs. Slaght, Grand Rapids; Miss Paulina Raven, East Lansing.

The meeting was accompanied by an exhibit, and a luncheon was served by the students of Miss Ruby McCormick Smith, Director of Home Economics in the Saginaw schools.

National Education Association. The program of the National Education Association in Oakland August 16-18 included several papers on Home Economics.

In the general session Miss Ednah Rich, president of the Santa Barbara, California, State Normal School presented the Vocational Aspect of Home Economics, and Mrs. Martha Foote Crow gave a paper on Mother Craft. The departmental congress on Vocational and Practical Arts included a paper on Home Economics Applied to Life.

Papers on Practical Arts for Girls in the High School, Science for Girls, Art and Design for Useful Ends, as well as the many on various phases of vocational, rural and industrial education touched more or less directly upon the same subject.

The interest in Home Economics is not confined to the specialized associations.

A Question Box. A question box for information on scientific problems is to be conducted through the columns of the JOURNAL by a committee of the Science Section of the American Home Economics Association. Miss Amy L. Daniels of the department of Home Economics, University of Wisconsin, is chairman of the committee and questions should be sent directly to her. If an immediate answer is desired, an addressed stamped envelope should be enclosed.

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